Lectures
ON
THE CAUSES, EFFECTS, AND TREATMENT OF TENSION AS MET WITH IN SURGICAL PRACTICE.

Delivered at the Royal College of Surgeons of England,

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LECTURE I.

MR. PRESIDENT AND GENTLEMEN,—When, through the kindness of my colleagues in the Council of this College, I was invited to accept the responsible position of Professor of Surgery and Pathology in this honoured institution, I acceded to their request as a matter of duty, although with much diffidence, as I felt mistrustful of my power to bring before an audience such as is wont to meet in this theatre material of sufficient importance to excite their interest, or to place it before them in a way sufficiently attractive to satisfy their critical requirements. To excite your interest, I have therefore selected a subject with which practical surgeons have long been familiar, and the importance of which they have recognised, but concerning which there is little or no literature; and should I fail to make it sufficiently attractive, I have confidence that it will prove suggestive and tend towards some practical good. The subject to which I desire to draw your attention is that of Tension. During the last few years the word has been freely used by both physicians and surgeons, although it has not been always employed with the same meaning. In my own student days it was rarely, if ever, heard; indeed, in a surgical point of view it had then but little significance. At the present time, however, we read and hear of it in many senses. The physician talks to us of arterial and muscular tension, and all admit that the word, as thus applied, carries with it deep meaning. The surgeon uses the term as applied to the pressure brought about by the distension or stretching of tissues by cystic or solid growths, by the extravasation of blood, and more particularly by what is far more common—the effusion of inflammatory fluids. I propose, therefore, in the following lecture, to invite your attention to these different causes of tension, and to trace their effects. I shall do this from the clinical point of view, under the conviction that some practical good may be derived from a full consideration of the subject, and with the hope that some light may thus be thrown upon the diagnosis and treatment of surgical disease.

With respect to the meaning of the word "tension" as employed in surgical work, and particularly in clinical work, it most frequently means the pressure brought about by the stretching or distension of tissue from either the growth of some neoplasm or the effusion of some fluid; tension, in this sense, meaning distension or the stretching of parts by a force acting from within—by centrifugal pressure, as it may be rightly termed. It is, however, applied in another way; that is, to the stretching of tissues which have been divided and brought together by sutures, the strain upon the sutures from the elasticity of tissues being the measure of the tension.

The effects of tension will be found to vary according to the nature of the tissue subjected to its influence. In one of an elastic kind, which yields readily under distension, the effects of tension are neither much felt nor well displayed, unless the expanding or distending force be carried to its full extent; whereas in a tissue which is unyielding and inelastic the mildest distending force is resented, and the effects of tension are forcibly demonstrated. Again, when the distending or stretching medium acts *rapidly*, the tension brought about in the tissues is severe, the symptoms associated with it are serious, and its effects destructive. On the other hand, when the distending, stretching, or straining medium acts *slowly*, tension is seen acting at a lower level, its symptoms are modified in intensity, and its effects qualified. As a general rule, the severity of the effects of tension, as well as the severity of the symptoms which characterises its different degrees, is found to turn upon the acuteness of its action and the elasticity of the tissues implicated. To this rule, however, there are exceptions.

The *ultimate* effects of tension upon any tissue turns, as already stated, upon the elasticity of the tissue and the rapidity with which the tension has been brought about; but they are invariably destructive. Its *immediate* effects, or mode of action, are primarily upon the circulation, particularly the venous; and the pressure from within of necessity tends to bring about—first a slowing of the capillary blood current through the stretched parts, and later on its stagnation, from which the death of tissue follows. When tension is very great, the venous and probably the arterial circulation through the tissues may be absolutely arrested. The nerves of the implicated tissues are at the same time stretched or pressed upon, and as a result pain is produced, and the severity of the pain is determined by the degree of pressure or stretching to which the nerves are subjected, and the character and quality of the nerve supply to the part. The pressure of tension, being centrifugal, acts all round. When the tension has been brought about by the effusion of inflammatory fluids, the effects described are aggravated, for the blood stasis which is encouraged by tension is well known always to exist in inflamed tissues. Tension consequently intensifies it; but of this later on. Where tension occurs in tissues which are not inflamed, inflammation is excited even when the tension is maintained at a low level. Where tension is more severe, destructive inflammatory changes rapidly supervene; but where it is most severe, the death of structure may result from tension without inflammation. Surgeons are familiar with many of these facts in their treatment of wounds; for it is to prevent tension and its evil effects that the drainage of deep, indeed of all, wounds is of such great importance.

Symptoms of tension.—The one subjective symptom to which tension gives rise is pain; and this is always found to vary with the degree of tension to which the tissues are exposed, and the quality and quantity of the nerve supply to the part. Other things being equal, a low degree of tension is associated with slight pain, and a high degree of tension with intense pain. Pain under all circumstances has a common relation to tension. In parts badly supplied with nerves, or at any rate with sensitive nerves, there may yet be tension and no pain, even when from tension the vitality of the stretched tissues may be destroyed. An ovarian cyst, for example, may be so tense as to be deprived of life, and this change be unattended by pain.

The diagnosis of tension.—In superficial structures tension can, as a rule, be readily estimated by palpation. In deeper parts this may be difficult; in bone, or in the cranial cavities, it is impossible. An educated finger can, where palpation is applicable, be brought to diagnose degrees of tension, as indicated by elasticity and hardness; although where the tense tissues lie deep this may be difficult. Where tension is not acting at its highest force, what is known as fluctuation may be made out. Where it is so acting fluctuation may not be found, only unyielding hardness of the parts implicated. The degree of tension of the part can, however, be determined by palpation, as in the eye, when the affected organ is compared with that of the sound side. The aspect of a tense tissue, moreover, helps diagnosis; its palpable enlargement as compared with the opposite and unaffected part, and its stretched appearance, being suggestive. In such a joint as the knee this condition can be well observed. But when the tense tissue is well covered with soft parts, as in a femur, the seat of periostitis, this observation cannot be made; but even there the enlargement of the part, and the engorged veins visible upon its cutaneous surface, are of diagnostic value as indicative of deep pressure. The diagnosis of tension of superficial, or comparatively superficial, structures can therefore be made with accuracy by observation and palpation; whereas, of deeper structures it can only be rationally inferred. Its existence can, nevertheless, be generally tested by surgical means, and its degrees measured. I must not, however, allow myself to dwell upon the diagnosis of tension under all circumstances, but with these general remarks, which have been made to clear the way, I will pass on to consider the effects of

tension as brought about by the growth of tumours and the extravasation of blood, to those of tension, the result of inflammation, which probably forms the most important feature of the whole question.

On tension from new growths.—Where tissues are stretched or distended by a new growth of a non-infiltrating or innocent character, and its increase is slow, the effects of tension upon the parts which cover it depend greatly upon the character of the tissue in which it is placed and its capacity for yielding. Thus, if the tumour be a subcutaneous lipoma, there is rarely pain, as there is no tension; and where pain is present, it is probably due to the implication of some cutaneous nerve. Should the tumour be more deeply placed, as in the breast, which is covered by skin and fascia, and still be innocent, there is not pain of any significance so long as the tumour is small and does not give rise to stretching or distension of its coverings, and what pain exists will probably be of a dull kind. The skin over the tumour, however, as growth continues, changes in appearance, its normal healthy aspect becoming congested. The engorged vessels are at first few, but later on become many, so that at last the surface of the tumour comes to assume a congested leaden hue. The slow tension of the tissues thus brings about a gradual blood stasis, which passes into or induces the condition of inflammation, and subsequently of ulceration; tension, acting at a low level for a lengthened period of time, always bringing about, although slowly, destructive changes. But should a simple solid or cystic tumour originate in still deeper structures, and be covered with a dense fascia, a very different series of symptoms has to be described. As soon as the fascia becomes stretched or the deep parts distended, tension or centrifugal pressure is produced, and with it pain becomes a symptom of more or less gravity; the character and severity of the pain being determined by the sensibility of the parts involved, the degree of distension of the tissues, and the nature of the nerves involved or pressed upon. For example, a tumour situated between muscles loosely surrounded may, in its early stage, cause little or no pain, since the parts yield under distension; but as it grows and stretches its fascial coverings, pain appears and steadily increases. Whilst, if growth still continues and the tension of the fascia becomes great, the pain from tension not only becomes severe, but it is also aggravated by the backward or deep pressure of the tumour upon the nerve trunks of the part in which it lies, the pain of local nerve pressure being added to that due to distension. Again, should a tumour originate in the sheath of a nerve, pain is at once produced and soon increases in severity. The tumour, by its expansile growth not being able to bring about a yielding of the nerve sheath, pressing backwards upon the nerve fibres, causes suffering. To illustrate these points the following cases may be cited.

CASE 1. *Tumour in the temporal region beneath the temporal fascia and muscle; intense local pain from tension.* Mrs. C——, aged thirty, came under my care in January, 1865, for a swelling in her right temporal region, which had been growing slowly for three years. It was hard and fixed to the temporal bone, and pressed forwards to the zygoma. The jaw was quite fixed, and could not be moved, apparently because of the stretched temporal muscle. The seat of swelling was the site of intense local pain, evidently due to stretching of the tissues. The lady subsequently died of exhaustion, after nine months of intense suffering.

CASE 2. *Tumour in a nerve sheath (median); removal; cure.*—Miss P——, aged twenty-three, came under my care in August, 1876, with intense pain in the parts supplied by the median nerve of the right hand, contraction of the fingers and inability to extend them on account of pain, and a deeply-seated swelling, about the size of half a hazel-nut, above the anterior annular ligament in the median line of the forearm. The pain had been coming for four or five years, but the swelling had only been noticed about six months. It had been mistaken for a ganglion and been punctured, but without relief. I regarded the case as one of neuroma in the median nerve, the tumour pressing upon the nerve exciting pain and forbidding extension. I therefore made a clean cut down upon the nerve, and turned out of its sheath a cystic growth the size of half a nut.[1] Immediate relief was given, and a good cure followed, the movements of the hand being perfect.

CASE 3.—In 1882 I removed from the upper cord of the left brachial plexus of a lady about fifty years of age a cystic tumour the size of a large hazel-nut, which had been growing for many months. It had caused intense pain down the arm, chiefly in the course of distribution of the musculo-spiral nerve, and from its hardness felt very like an exostosis. On exposure in the subclavian triangle, it was found to be in the upper nerve-cord of the brachial plexus, and within its sheath. On division of the sheath the cystic tumour rapidly enucleated, and this process clearly proved the tension to which the parts had been subjected, and explained the severity of the pain the patient had experienced. Dr. Goodhart reported that the growth seemed to be a blood cyst. A good result followed the operation, and the lady is now well.[2]

When tumours originate in bone, there is, under certain conditions, severe pain, whilst under others there is but little The presence or absence of pain and its degree are regulated by tension. For example, suppose a solid or cystic growth originates in the antrum of the upper jaw. As it grows it tends towards the expansion of its bony casing, and gives rise to tension. As a result pain is induced. This, however, is not often very severe; for the thin bony wall, as a rule, gradually yields to the slow pressure from within, and in due time gives way, thus relieving tension. As a consequence, what pain may have been present at once becomes ameliorated, and what is left is to be explained rather by the implication of the nerve trunks of the part than by tension. When the shaft of a long bone becomes the seat of a cystic growth there is more pain, and this pain is from tension, since the wall of bone which surrounds the cyst is dense and unyielding to the centrifugally expanding pressure of the cystic growth. The pain in a case such as this is of the usual aching character, but it does not appear to be aggravated by the warmth of bed, as in inflammatory troubles. These points are well illustrated in the following case.

CASE 4. *Expansion of the shaft of the tibia from a cyst: trephining of the bone; recovery.*—Henry D——, a healthy man, aged twenty-four, came under my care at Guy's Hospital on Jan. 6th, 1871, with considerable expansion of the centre of the shaft of the right tibia, which had been coming for two years. He had at times suffered much pain in it, but as a rule it had little more than ached after exertion. He had never had syphilis, and no history of an injury could be obtained. When seen, the bone was found to be expanded in its centre to twice the diameter of the normal bone. The surface of the swelling was much grooved by the cutaneous veins, and the integument over it was slightly œdematous. The parts were tender on firm, but not on gentle, pressure, and the seat of a dull, aching pain, which it is not stated was worse at night. On Jan. 13th I cut down upon the swelling and trephined the bone with a larged-sized instrument, and exposed, one inch from the surface of the bone, a cavity as large as a full-sized walnut, which was lined with membrane or granulation tissue, and contained serum more or less blood stained, but no pus. It was not a hydatid. The bone cut through was denser than natural, and the periosteum over it was thickened. After the operation all pain ceased and a rapid recovery ensued. When I saw the man three years later he was quite well. The enlarged bone had contracted to its normal dimensions, and, beyond the scar of the operation, there were no indications of trouble.

On the other hand, should a solid sarcomatous growth originate in the centre of a dense bone in which there is but little cancellous tissue, such as the lower jaw, in which also there is a canal containing a sensitive nerve, tension in its highest force is the result. This was forcibly illustrated in a case of my colleague, Mr. Cock, many years ago at Guy's.

CASE 5.—A man had a fibrous tissue growing in the dental canal of the lower jaw, and involving the inferior dental nerve. The agony this man suffered was excruciating, and the relief he experienced by the operation of trephining the bone and removal of the growth was almost magical. In this case the dense bone which surrounded the tumour resisted the effects of steady pressure, and was not absorbed as cancellous bone would have been. The effects of distension or tension upon the walls of the cavity containing the growth was consequently strongly marked and made manifest by pain, which was in its turn intensified by the compressing influence of the fibroma backwards upon the dental nerves. As an example of tension brought about by a slowly developing solid growth in unyielding sensitive structures, I am unable to adduce a better.

[1] Prep. Guy's Museum, 1614[31].

[2] Prep. 1614[5] Guy's Museum.

Tumours of bone do not, however, always distend bone and give rise to tension. Solid sarcomatous growths, which originate in the cancellous tissue of the long bones, rarely do so, at any rate to any extent; for the tumour, as it grows, by its constant pressure, steadily causes atrophy or absorption of the bone. And the enlargement of the cavity in the bone, going on *pari passu* with the increase of the tumour, neutralises the effects of tension, and reduces its influence to a low degree. The patient, consequently, under these circumstances, suffers but little, and what pain exists is rarely of a severe or constant kind. As the tumour grows, however, the little pain which may have been present disappears, for the bone after a time becomes perforated by the growth, and tension therefore ceases to exist. With its disappearance pain at once diminishes, and unless the growth presses upon nerves, or structures well supplied with nerves, its progress is probably almost painless. It would appear, therefore, that in the growth of tumours of the soft parts, as well as of bone, the influence of tension is one which cannot be ignored. As the chief cause of pain, directly or indirectly, it is a potent factor, and as a clinical symptom it is one of great diagnostic value.

With this brief reference to tension of tissues, as induced by the growth of solid or cystic tumours, or to what may be called slow tension, I must pass on to consider tension as the result of sudden effusion, and more particularly of blood, to which class the term acute or rapid tension seems applicable. When a cavity or tissue becomes suddenly distended from any cause, the amount of tension which ensues is inversely proportionate to the yielding elasticity of the walls of the cavity or tissue itself. The effects of the distension turn upon the degree of tension that is produced; and the symptoms to which the tension gives rise vary with the nerve supply to the part. Thus, in every-day practice, where blood is effused, as a consequence of an injury, into subcutaneous tissue which is thin, elastic, and capable of distension, as in the eyelids and scrotum, the patient experiences but little pain or other morbid sensation beyond a feeling of fulness, unless the hæmorrhage is great and the parts are stretched to their utmost. Whereas, should the effused blood be rapidly poured out into the skin of the ear, the junction of the nose with the upper lip, parotid region, or outer labium, parts which are not only sensitive but incapable of much stretching, the pain is severe, and this symptom is entirely due to the stretching or tension of the tissues into or beneath which the blood has been extravasated. Where no distension of parts exists, and as a consequence there is no tension, subcutaneous hæmorrhage may take place to a considerable extent and give rise to little local pain or other symptom than local swelling. The pain which attends subcutaneous hæmorrage is in proportion to the degree of stretching or tension of the parts implicated. No tension means little pain; severe tension severe pain. When hæmorrhage takes place beneath the deep fasciæ which binds down tissues, pain is often severe; the distension of the fascia, the tension of its fibres, and the centrifugal pressure generally, being its cause. This is fairly illustrated in a case of simple fracture above the ankle, and in most sprains of joints attended with blood effusion. As the blood is absorbed, pain goes and repair progresses.

When we consider the subject of hæmorrhage into cavities, and the symptoms it produces, the same conclusions are arrived at. Thus, a patient may bleed to death from hæmorrhage into the peritoneal cavity, without manifesting any other symptoms than those which are described as general. There is no pain. The same may be said with respect to bleeding into the thorax. In neither of these cavities can tension, as a result of bleeding, be well produced, and as a consequence there is no pain. In intra-cranial hæmorrhage, where there is no external yield of tissues, but only backward pressure, the effects of tension are very marked and destructive.

When bleeding, however, occurs into cavities which are within the range of distension, and in which, therefore, the effects of tension or centrifugal pressure may be felt or demonstrated, a different result has to be told. Thus, when a knee joint is the seat of fracture of any of its bones, and as a consequence hæmorrhage takes place into the joint, the cavity may become so distended with blood, and thus tense, as to produce severe local pain and general disturbance, which, if not relieved, may be followed by the destruction of the joint. The eyeball may be the seat of extravasation of blood into its anterior, middle, or deeper chamber, and its presence be unattended by any pain, unless the hæmorrhage be sufficiently extensive to distend the globe and give rise to tension. The tunica vaginalis of the scrotum may likewise become the seat of hæmatocele, and the amount of pain associated with it will turn upon the rapidity of the effusion and the mechanical distension or tension of the walls of the cavity into which the blood has been poured. The pain in all these cases, when it occurs, is clearly dependent upon tension.

When hæmorrhage takes place into deep, unyielding, and possibly sensitive structures, the degree of pain to which it gives rise can hardly be measured.

CASE 6.—Some twelve years ago I was asked by the late Dr. Remington of Brixton to see a fine young man, of about twenty-five, who, the day previously to my visit, had received a blow upon one of his testicles, and from the time of its receipt had suffered intense local pain, which opiates and local treatment had failed to relieve. When I went into his room the patient was walking about with his hands grasping his genital organs, and moaning with agony. In one testicle there was intense pain of a throbbing character, and the pain had since the accident been so severe that the patient said he had neither slept nor rested. I examined the scrotum, and failed to see any external signs of injury. The painful testicle was, however, larger than its fellow, and this enlargement was in the body of the gland. On careful manipulation, I made out a tense point in the body of the testis, and this point was painful. The man's temperature was normal, and there did not appear to be any local heat about the testicle. I came to the conclusion, therefore, that in this case the patient was probably suffering from hæmorrhage into the body of the testicle itself, and that the intense pain which was experienced was due to tension. I consequently persuaded him to allow me to introduce a fine exploring trocar and cannula into the swelling; which I did, giving exit to a jet of blood or blood-stained serum which spurted out in every direction. With this spurt all pain ceased, and a rapid convalescence followed. That the pain in this case was due to the tension caused by the rapid effusion of blood into a sensitive gland encased in an unyielding fibrous covering—the tunica albuginea—there can be little doubt; and with the diagnosis the treatment was simple.

CASE 7. *Puncture of the testicle in the operation of tapping a vaginal hydrocele; hæmorrhage into the testicle producing pain from tension; operation and recovery.*—Mr. D——, aged twenty-one, consulted me in March, 1871, on the advice of Dr. Tyson, of Folkestone, for some affection of his left testicle, which had been swollen for ten years or more, but had only been painful since it had been surgically treated. One month before I saw him he went to a surgeon, who tapped the swelling and drew off a blood-stained fluid mixed with blood clot. When the instrument was withdrawn the swelling steadily reappeared, and the testicle became the seat of intense pain, the pain passing up the cord. Since then the swelling had steadily increased, and the pain had been sickening. When I saw him the testicle was the size of a cocoanut, ovoid in shape, smooth, and very painful. It was not hot. Thinking the case might have been a hæmatocele of the tunica vaginalis, although the extreme pain suggested something else, I at once explored the tumour by means of an incision, and found that it was a hæmatocele—but of the body of the testicle, and not of the tunica vaginalis. There had evidently originally been a hydrocele of the tunica vaginalis, for when I operated there was evidence of this fact; but the testis itself had been converted into one large cyst containing broken-up and fetid blood. I removed the whole organ, which was useless, and a good recovery ensued. In this case the testicle had doubtless been punctured when the hydrocele was tapped, and as a consequence hæmorrhage followed the puncture. The pain which came on after the operation of tapping, and which had not existed before, was clearly due to tension within the testicle brought about by the bleeding.

I have another case of tension brought about by the extravasation of blood, which I should like to relate since it is well in point.

CASE 8.—In 1877 I saw with Dr. Donald Hood of Green-street, but then of Caterham, a gentleman who in a hunting accident had ruptured his urethra, and was suffering from retention and urinary extravasation. These symptoms were relieved by perineal incisions and catheterism, and all went well for three days, when bleeding from the urethra again

appeared, associated with agonising pain at the root of the penis. On examining him through the wound, which I then did, I found the bulbous portion of the urethra very tense and exquisitely painful, and it was clear that this tension of the part was due to fluid. I accordingly made an incision into the bulb, and with the incision what must be described as an explosion at once occurred, for blood was scattered in all directions. Copious bleeding followed, which clearly came from the artery of the bulb. The hæmorrhage was controlled and all eventually went well. The tension of the bulb in this case from arterial hæmorrhage was testified by the presence of intense local pain, and it was proved by the explosive sound caused by the division of the distended tissues, as well as by the scattering of blood upon the operator and his assistants as soon as the retaining capsule was divided.

Tension in these cases was acting at its highest force, and, as the parts implicated were highly sensitive, severe pain was the result. Tension being relieved in every case, pain was banished, and repair went on in its normal way.

This accumulative evidence which I have brought together, I think, therefore, points to one conclusion—that tension and pain as met with in cases of growths, expanding tissues; or of hæmorrhage into tissues and cavities, are closely related; in fact, that pain in these cases is the result of tension.

On tension the result of inflammation.—I will now pass on to consider the subject of tension in its relation to inflammation, and need hardly remind you that swelling is one of the classical symptoms of the process, and that this swelling is due to the exudation from the slowly flowing blood stream of corpuscular liquid which passes through the inflamed tissues, and which may lead up to blood stasis; this slowing of the blood current and consequential exudation forming Sanderson's central phenomenon of inflammation. Indeed, these elementary truths are such as every student and practitioner should ever have before him when considering any inflammatory affection, for they form the key to an intelligent appreciation of the local symptoms and pathological phenomena of every case. When effusion takes place, therefore, into any tissue which is inflamed, swelling follows, and the amount of swelling turns upon the character of the tissue into which it takes place. Where there is much connective tissue, and the parts are elastic and yield to distensile forces, the swelling is great; and as the resistance to it is not serious there is little or no tension, such an effect only following extreme distension. Where the effusion is poured out into connective tissue contained in fibrous sheaths, or beneath or within fascial envelopes, as in joints, the distending force is great, and tension is found acting to a high degree; and where it exists in bone or in unyielding bony cavities, there is of necessity tension, which is of the severest type.

That local pain is a sign of tension all agree, although all will probably not consent to the opinion that tension is the cause of most pain. In inflammation, however, I think there can be little doubt as to the truth of this view, for pain and tension are practically proportionate, the former being felt in exact proportion to the degree of the latter, and rising and falling with its force. Indeed, in a clinical point of view, I believe that the pain of tension should be regarded as a test symptom of inflammation. Where there is feeble tension in any inflamed part, the pain hardly exceeds that of uneasiness; where there is high tension, the suffering is great; where tension is relieved by natural or surgical processes, pain goes. Under all circumstances, the presence of pain in any local inflammation may be accepted as a sign and indication of tension and a call for its relief. When pain is increased at night—that is, when the patient is warm in bed and the circulation is acting at its highest force—the probabilities are that the affection is inflammatory, and that such increase in the force of the circulation which is promoted by warmth tends towards the production of tension or its aggravation.

The *effects of tension* upon the inflamed tissues depend much upon its degree. When it is but slight, tension may tend only towards the maintenance of the inflammatory process; when it is more severe, it must help, not only to keep up, but also to aggravate, the action; and when it is acting at its highest force, there is no escape from the conclusion that it assists powerfully to bring about the destruction of the tissues which feel its immediate influence, and to encourage inflammatory action in such as are more remote. How it helps to bring about destruction of inflamed tissue is not difficult to understand, since it does so in tissues that are inflamed in the same way as it has been shown to do in those that are not so affected—that is, by helping to bring about blood stasis. And as in tissues that are inflamed the tendency to blood stasis invariably exists, so, with tension acting upon them, there can be no surprise that this blood stasis, with all its evils, is greatly encouraged. With this blood stasis the probabilities of starvation of tissue are consequently much enhanced, and, as a result, their death is rendered more probable. To say, as students are taught to say, that death of inflamed tissue from tension is due to the cutting off of blood supply to the inflamed part is a fundamental error. The blood is in the tissues, but it is stagnant and not circulating. The death of inflamed tissues from tension takes place, as it does in a strangulated part, from the stasis of its own venous blood. It is a form of static, not of anæmic, gangrene—of death of tissue brought about by the stagnation of the blood in the capillaries, and not by a want of blood supply.

I will now proceed to illustrate the effects of tension upon different tissues; and first of all let me take as an example a case of cutaneous erysipelas, and assume that it has attacked the skin of a part loosely connected with the deep tissues and capable of ready distension. The local sensation produced by the disease does not go beyond a sensation of stiffness—it does not amount to pain; but let the inflammation spread to parts so placed as to be anatomically capable of but little, if any, distension, how different then are the symptoms complained of, and how soon inconvenience passes into pain, even of any acute kind. Let anyone who has had erysipelas, or any inflammation of the nose, upper lip, nape of neck, or ears, answer this question, and at the same time tell us the comfort he experienced when the tension was mechanically relieved. In this example of cutaneous inflammation the view that local pain is fairly due to tension is well supported, and the relief that is given to the symptoms by local treatment helps the conclusion.

Let me now draw an illustration of the effects of tension from inflammation of a deep structure bound down by inelastic tissues, such as is met with in a familiar example of thecal inflammation. What pain is at once experienced here from the first onset of the trouble, and how rapidly it intensifies! What destruction of tissue follows if relief be not given! And what comfort and rapid recovery ensue if the case be rightly treated! These facts are familiar to us all, and yet I am rash enough to say, even in your presence, that I am somewhat in doubt as to whether the generality of surgical practitioners realise their full meaning, and so conform their treatment to the exigencies of the case as to give their patient the best chance of a recovery. Let me take this example of thecal inflammation, therefore, as a text, and enlarge upon it, first of all following its natural course. Inflammation attacks the tissue; the capillaries of the inflamed part consequently become more or less thrombosed, and as a result effusion takes place. The effusion is confined in a tight channel, the walls of which are but feebly capable of yielding, and as a consequence the fluid, pressing centrifugally everywhere, not only violently stretches or distends the tissues in which it is confined and gives rise to high tension, but also seeks a vent by flowing in the line of the least resistance along the course of the tendon up the forearm. From this pressure, if relief be not given, death of tissue speedily follows, this result being brought about, as already described, by the influence of tension in encouraging the blood stasis which forms part of the process of inflammation. With the death of tissue suppuration within the thecal channel takes place, rupture of the weakened thecal structure follows, and in the end comes the external discharge of the dead tissues, with probably many burrowing abscesses. A vast amount of destruction of tissue from tension has taken place quite unnecessarily, since by active and scientific early treatment a very different result could have been obtained. The cause of all this extensive trouble was practically due to tension, and if this had been relieved in its early origin recovery would have been possible, nay probable, without loss of structure.

The inference to be drawn from such a case as this, and from all others like it, is that to relieve tension by giving vent to pent-up fluids in distended tissues is a primary surgical duty, and that this practice cannot be applied too early, may safely be dogmatically advised. At the present day amongst experienced surgeons it may be said that this practice is fairly universal; but is it? Is there not even now a lingering dread in some surgeons' minds of incising or even

deeply puncturing an inflamed tissue before suppuration has commenced? and have not many of us heard, when an incision has been made into such inflamed tissues as those just mentioned, something like an observation of pleasure that a fluid like pus has been seen to flow, as if to justify the act? Whereas the surgeon's pleasure should be where his duty lies, to give vent to pent-up inflammatory fluids before suppuration or other destructive changes have taken place. In my own practice, I as a matter of routine cut down freely and immediately upon a finger the seat of thecal inflammation, and always congratulate myself that I have done so when only serum and blood escape, and no pus; for the existence of pus means destruction of tissue under all circumstances, a result which should be avoided.

Again, let me give another example. A joint, let me say a knee or hip joint, becomes inflamed and acutely distended with inflammatory fluids. The synovial membrane as a consequence becomes tense from distension, and there arises the natural fear that disorganising changes in the joint will soon occur if the tension thus produced be not relieved. The joint consequently is either aspirated or punctured with a tenotomy knife through a valvular punctured wound to relieve tension, and *some little* of the serous exudation is drawn off or allowed to escape into the connective tissue, where it will become absorbed. This little operation at once not only relieves pain by relieving tension, but it does more, for in a few days the fluid which was left in the joint disappears by natural processes, and convalescence is soon established.

An acutely inflamed bursa may be similarly dealt with, and an equally good result ensues; and in the following case a like treatment of a hydrocele was followed by a like result. The case I give in the words of Dr. Bower Harrison of Manchester.

CASE 9.—He says: "In March, 1878, I was myself the subject of hydrocele of about seven or eight months' duration. On the 20th instant, on getting out of a warm bath, I introduced an ordinary hypodermic syringe into the hydrocele, and, using it as an aspirator, I removed about ten minims of fluid. A few drops of water remained on the spot where the syringe had been used. This dew continued to show itself for some time afterwards, whilst a perceptible softening of the whole tumour took place. In a few days the hydrocele had perceptibly diminished, and in a short time had wholly disappeared. It never recurred. In mentioning the case to my friend, Professor Lund of Owens College, Manchester, he expressed himself as much interested, saying that he felt convinced that the diminution of tension in the case of an imprisoned fluid greatly promoted its absorption. He further stated that he was in the habit of speaking of this to his class as an important *law*." I am quite convinced that our friend, Mr. Lund, is right in this matter. Indeed, I have for years taught this law myself. The withdrawal of some of the distending fluid from the tense synovial or serous sac not only relieves pain with the tension of the part, but at the same time frees the lymphatic, venous, and arterial circulation from the impeding effects of local pressure, and thus, by encouraging a more normal or healthy action of the vessels generally, tends towards the relief of the blood stasis, which is the one main important pathological condition of inflammation, and thus helps towards recovery. In the same way the contents of an abscess may often become absorbed by natural processes, after a sufficient quantity of its contents has been withdrawn to relieve tension.

Again, glaucoma attacks the eyeball of a patient, and, whether acute or chronic, is attended by distension of the globe of the eye and extreme pain, the result of tension. Its treatment consists in an operation for the relief of tension, and without an operation in one of its forms recovery is considered by all authorities to be hopeless. "We must always bear in mind," writes my colleague Mr. Higgens, "that an operation to be successful must be performed early," the author meaning by "early" that it should be undertaken before the secondary changes in the structure of the eye, the result of distension, have been brought about. Surely this principle of practice, which is so binding and valuable in the treatment of an affection of the eye due entirely to tension, should be equally binding, as it would be equally valuable, in the treatment of all local inflammations in which tension has such a pervading influence.

Acute inflammation of the pulp of a tooth affords another illustration of the evil effects of pent-up inflammatory fluids upon surrounding parts, and of the severity of the local symptoms which must be attributed to such a cause. "In this case," writes Moon, "every factor for the production of agonising pain is present; the distensible pulp, largely supplied with nerves, undergoes vascular engorgement within an unyielding case—closed in at all parts except at the aperture of exposure." The trouble, if left unrelieved, soon ends in the death of the pulp, and too often in the extension of the inflammation to the periosteum of the jaw bone and surrounding parts, with its ultimate bad effects. How many of these consequences may be avoided by judicious treatment I must not now stop to inquire; clearly the majority. Where the antrum of Highmore is involved in acute inflammatory trouble the same conditions are present. Tension, and as a result, pain, are prominent symptoms, and these are only to be relieved by surgical action.

In the surgical affections of the ear many illustrations of the same truths may be found. In furuncles and inflammation of the external meatus, as is well known, severe pain is experienced, the pain being the direct result of the unyielding condition of the skin and connective tissue in which the inflammatory process originates, and the effects of the tension being indicated by the throbbing pain, the feeling of fulness in the part, and the general febrile disturbance which in these cases is so often present. In acute inflammation of the middle ear, or in the acute grafted upon a chronic affection, the evil effects of tension are forcibly illustrated, for in such cases the walls of the inflamed cavity are chiefly bony; and where this is not the case, the foramina, which communicate, on the one hand, directly externally, and, on the other, indirectly internally, with the cranial cavity itself, are only covered with a membrane. When this cavity, therefore, is filled with inflammatory fluid, and the inflammatory process continues, the full effects of the centrifugal distending force upon the walls of the cavity, in bringing about tension on its yielding and unyielding walls, is very marked. Indeed, it may be said without fear of contradiction that there are few local inflammatory affections which give rise to more severe local or general symptoms than otitis media. The severe and agonising local pain, radiating in all directions, the high fever and general constitutional disturbance, and too often the brain symptoms and complications which mark its natural progress, all point to the evil effects of pent-up inflammatory fluids, whilst the rapid influence of sound local treatment support a like conclusion.

Again, in inflammation and suppuration of the kidney brought about by the presence of a calculus or any obstructive cause in the urinary track, the same conclusions find full support. In these cases, the lumbar or kidney pain—usually synonymous—turns almost entirely upon the tension or distension of the pelvis of the kidney. When, from any cause, the ureter of a kidney thus affected is obstructed, pain is caused or increased; when the ureter opens and allows the free exit of pus, pain diminishes, or even disappears. The disappearance of the pain depends entirely upon the blocking of the ureter and the consequent tension of the pelvis of the kidney. On this account a patient with a disorganised kidney may go on for years, suffering when obstruction to the flow of pus takes place, and being comparatively easy between-whiles.

Indeed, in any suppurating cavity the same cause and effect can be traced. Retained pus always gives rise to pain more or less severe, and its severity turns upon the distension of the abscess cavity. When the tension is brought about suddenly, and is severe, the pain is great, as in acute abscess; where it is produced by a chronic process, the pain often is but little. The pain of abscess generally turns almost entirely upon the tension of the walls of its cavity, and its severity upon the rapidity with which the tension is brought about, the anatomical surroundings of the part having its due influence. If further illustrations of the effects of tension were needed, abundance might be adduced from the surgery of inflamed periosteum and bones. For my present purposes such are not required, although in another lecture I propose to bring the subject before you as a whole.

I must, however, as a final and possibly convincing exemplification of the truth of all my preceding remarks, refer to tension as seen in wounds, whether the results of accident or operation. In the treatment of wounds, and more particularly of deep wounds, the evil effect of tension upon the process of repair is well recognised; and it may, I think, be said that, if wounds are treated upon approved

modern methods, the subject of the wound is healthy, his surroundings are wholesome, and due provision is made in the wound against the possibility of any fluid exudation from the wound being retained, so as to give rise to tension, the surgeon may with confidence look forward to the reparative process in the wound being carried out without the slightest trace of inflammation, and without pain; whereas, if this important point of treatment is forgotten, disregarded, or inadequately provided for, the slightest trace of tension upon the margins of the wound, or of distension of its depths, will to a certainty show its evil effects, not only by preventing quick or any form of union, but also by changing the quiet physiological process of repair into the pathological process which we call inflammatory, and thus set up a destructive in the place of a constructive process. This result ensues quite irrespective of the form of wound dressing that may have been employed.

I should like from this chair to repeat what I have been long teaching, and what modern surgery has done so much to inculcate, that repair and inflammation are not only not identical but incompatible; that repair is a physiological constructive restorative process, whilst inflammation is a pathological destructive one. When the latter attacks a wound that is healing by John Hunter's first intention, arrest of repair first appears, then disrepair, and the injured tissues will probably have to heal by granulation. And should, by some chance, inflammation attack a healthy granulating surface, the granulations will at once break down, and their molecular death, or the ulcerative process, take their place, the constructive process in both cases being destroyed and exchanged for the destructive and inflammatory. In the repair of all parts more or less destroyed by the inflammatory processes, inflammation must cease before repair begins. I would that this view of repair and inflammation were more generally entertained; it would help clinical surgery, for it would lead all surgeons, in their treatment of wounds, to avoid and guard against every outside influence that can possibly give rise to the over-action which we call inflammation, whether such be the introduction or germination of microbes from without, or the effects of tension from within.

I am not, however, here discussing the general causes of local inflammation. My object is simply to show that tension in wounds may either originate or keep it up; where the tension is severe, acute inflammation will follow, as in tissues which are not wounded; where it is acting at a lower level, it will still be destructive, although less so in degree. Should sutures of any kind be introduced to keep the edges of a wound together, and upon one or two the effects of tension be felt, at such points local inflammation will originate and pass on to ulceration. Whereas about the other sutures, at which there is no tension, and yet which in other respects are similarly placed, no such action will be found to exist. And this result will occur quite irrespective of the nature of the sutures employed, and however carefully the antiseptic or other treatment of the wound be carried out. The local inflammation in these cases is clearly due to local causes, and to no other.

Again, if in a deep wound blood or serum is allowed to collect in sufficient quantities to separate its approximate surfaces, and by so doing give rise to tension of the surrounding tissues, inflammation of these tense structures will to a certainty follow, and such will pass on to suppuration if the tension be maintained. Whereas, if the tension be relieved soon after its appearance, the inflammation will soon subside, and the reparative process reassume its physiological work. The wounded surfaces, however, under both circumstances, are not likely to unite by quick or primary union, but by the slower process of granulations. In fact, the influence of tension upon the repair of wounds, both as a cause of inflammation as well as a source of its persistency, supports, if it does not prove, the conclusions which the consideration of tension associated with other conditions has led me to draw. These conclusions may be expressed as follows:—That tension has a wide pervading influence in clinical surgery, as well as a decidedly marked effect upon the progress of disease. That it is the product of many causes, and that these, for clinical purposes, may be conveniently divided into the inflammatory and non-inflammatory. That it stands foremost amongst the causes of pain, and in inflammatory affections it is probably the chief pain factor. That where the causes are not inflammatory the tension to which they give rise will, if maintained for any time at a low level, or rapidly rising to a high level, excite inflammation in the tissues affected. That, where the cause is inflammation, the tendency of tension is to keep up or intensify the inflammatory action and strongly to encourage its destructive influences. That tension in every degree has a destructive tendency, and the rapidity of the destructive process has a direct relation to the acuteness of the tension. That, as in wounds the slightest degree of tension is injurious, so, in their treatment, the use of the drainage tube, or due provision for complete drainage, is a point of such primary importance as to relegate to a secondary position the mode and character of the dressing which is employed, since a want of attention to the efficient drainage of a wound under every form of dressing is followed by the same result.

If these conclusions be true, and I am satisfied that in the main they are true, two others ask for expression, the first being the value of local pain as a clinical sign of tension and an indication for local treatment, and the second the expediency, if not necessity, of relieving tension as speedily as possible under all circumstances. To both of these points I must briefly call your attention.

The treatment of tension.—If arguments were needed to support the view that the pain associated with a local inflammation is chiefly due to tension, they would be found in its treatment; for if the local inflammation be situated in an extremity—say a hand—the local pain will at once be relieved by such a simple measure as elevation of the limb, the elevation tending at once to empty the venous capillaries, and at the same time to diminish the force of the arterial blood supply to the inflamed parts, and thus to relieve the blood stasis and the tension resulting from it. On the same principle, the arrest of the flow of blood through the main artery of the limb by temporary pressure, or the more or less complete and permanent occlusion of its lumen by temporary or permanent ligatures, has been found to act beneficially. By such means pain is at once relieved, and other advantages at the same time secured. Local venesection, leeching or cupping in either of its forms, must also act in the same way, by relieving tension; the local abstraction of blood from the seat of an inflammation or its neighbourhood so emptying the congested vessels in the outer zone of an inflammatory centre as to encourage the circulation of the part generally, and by so doing give relief to the over-gorged and dilated capillaries of the centrally inflamed tissues. The local loss of blood, even when very limited in extent, relieves tension, and with it its diagnostic symptom, pain. In the same way, it is probable that cupping, dry or moist, and counter-irritation, have a beneficial tendency, and that these means, by drawing blood to a part not too remote from the seat of inflammation, help to relieve the congested capillaries in the focus of disease, and thus to favour the circulation through them; this favouring of the circulation tending, of necessity, to discourage blood stasis and hyperæmia, to relieve pain, and to help the natural powers to bring about a cure of local inflammation by resolution.

In the inflammation of soft parts, where the stretched tissues are naturally elastic, their resiliency may have a beneficial influence towards the re-establishment of the circulation and the favouring of a recovery by resolution; whereas, in the inflammation of the more inelastic and unyielding structures, such as the eyeball, middle ear, joint capsules, periosteum, and bone, no such help can be counted upon, for when these parts become the subject of acute or chronic inflammation, and consequently the seat of tension, such tension and inflammation, unless relieved by surgical art, will continue, and thereby bring about permanent or destructive changes in the inflamed parts, the result being in one case thickening and consolidation of structure, and in the other suppuration, ulceration, or death of tissue. It would therefore appear that in the treatment of local inflammation the relief of tension is an all-important point of practice to be followed, and that the means which in any individual case can best fulfil this object will be the right ones to adopt. In some cases the relief may be brought about or helped by position, in others by pressure. In acute cases it is only to be efficiently produced by a puncture, incision, drill, or trephine into the tense tissues or cavities; whereas, when the soft and elastic structures of the body are the seat of trouble, local venesection, cupping, or the application of leeches may suffice, and it would be

well if such means were more frequently employed. But wherever tension may be found, and in whatever tissue it may be situated, means must be employed for its relief; since, so long as it exists, the causes which led to it will probably continue, unless by the natural progress of the case tension becomes relieved by the destruction of the structures which are under its influence, or natural processes are sufficient to bring about a cure.

Where pain is present as an indication of the existence of inflammatory tension, the surgeon has a guide of great value to help him to the right treatment of his case, and it is one which he should rightly use; although where pain is absent or but feebly expressed, there is the same necessity to relieve tension where it exists, for tension may be present even with distension without giving rise to pain; as, for example, in certain forms of peritoneal inflammation. In these cases, however, the same line of treatment is called for, and the same principle of practice is applicable as in others to which attention has been drawn; for, with an abdomen full of fluid, which is pressing in all directions upon veins, lymphatics, arteries, and viscera, with an embarrassed circulation, and an arrest of all physiological action of the organs implicated, how can any curative action be expected to take place? Let the distended abdominal cavity be relieved by the evacuation of its contents; let some or all of the inflammatory products which may retard repair be washed away and the circulation be disembarrassed; let the viscera be freed from all pressure, and the physiological action of all these important parts be allowed to have fair play, and then recovery may be brought within the bounds of possibility, if not confidently anticipated. The good results which have followed the modern treatment of peritonitis by laparotomy and irrigation tend to support this view, and it is, I believe, by carrying out the principle I have feebly indicated that such successes are to be explained. In support of this view I would allude again to the partial withdrawal of fluid from tense cavities for the relief of tension, and the result which commonly follows the practice, for it cannot but be acknowledged that this action is often speedily followed by the absorption of the liquid which is left, and recovery from the local trouble. The partial withdrawal of pent-up fluids apparently so frees the venous, lymphatic, and arterial circulation of the parts which have by the pressure been previously embarrassed, as to be followed by their full physiological action and the progress of repair towards a cure. In many a large hæmatoma I have despaired of its absorption and a natural cure till I had withdrawn some of its serous contents and removed tension, when a rapid recovery followed.

In not a few inflamed knee, hip, and other joints made tense by inflammatory effusions, and so tense as to excite a fear of loss of structure, has a rapid recovery followed a careful aspiration sufficient to relieve tension, or a subcutaneous puncture of the joint. Even in large abscesses, and particularly chronic abscesses, the same result may be chronicled; that is, the rapid absorption of what may have been left in the abscess cavity after the withdrawal of only a part. And the explanation of these results can probably be found in what has been already said.

I have thus, Mr. President, laid before you—although, I fear, imperfectly—many, if not most, of the clinical data connected with what has been called tension, or centrifugal pressure. I have pointed out its causes and its effects, and more particularly the great value of pain as a significant sign of most forms of tension, and especially of inflammatory tension. I have attempted also to bring out from these facts a certain principle of practice, the value of which I do not think I have exaggerated. If I were to test the value of the practical principle I have brought before you by my own personal experience, I should place it very high, for I can assure you that I have for years acted upon it and not found it wanting. To carry it out fully, we must, however, return to former lines of treatment, and employ more frequently than we do the practice of leeching in local and comparatively superficial inflammations, and of puncturing, incising, drilling, and trephining in bony and subfascial inflammations; and these means should be employed early in every case. Should we employ counter-irritation, we shall do so on a kind of principle which is intelligible, and we shall therefore be more likely to employ our measures with success. To illustrate, however, what I have said to-day more fully and completely, I must go to the diseases of the bones and periosteum; and it is to these that I hope to draw your attention in my next lecture.

ON THE SURGICAL TREATMENT OF RENAL CALCULUS.

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(*Concluded from page 1184.*)

CASE 3.—*Nephro-lithotomy for an oxalate of lime calculus and a large phosphate of lime calculus in the right kidney of a male; symptoms of nearly fourteen years; recovery.*—On July 12th, 1887, I saw with Dr. Hamerton, of Southampton-street, Strand, Mr. D——, a gentleman of middle age, who for nearly fourteen years had suffered pain in the region of the right kidney and occasional hæmaturia, and for a long time had passed pus with the urine. For the last eight years he had been worse than formerly and within the last two or three years his symptoms had become more aggravated still. During the latter period—from two to three years—he had been treated for cystitis. His bladder had been more than once sounded by Sir Henry Thompson. For a long time the quantity of creamy pus in his urine had been very considerable. On two occasions, at long intervals, there had been rather smart hæmaturia after railway journeys. Of late there had been noticed fulness and greatly increased resistance in the right loin, and Dr. Hamerton, as well as his partner, Mr. S. Mills, believing him to have a stone in his kidney, asked me to see him.

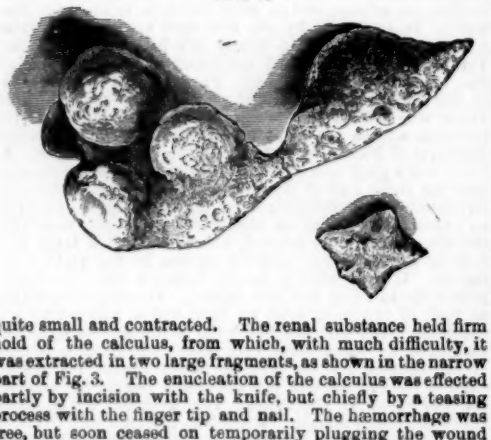
I found the patient to be a short, spare man, with a pale face and general appearance of ill health, though his muscles were firm and well developed. He had no cough or chest trouble, no œdema, and no more albumen in his urine than was to be explained by the abundant creamy pus, which sometimes amounted to nearly one-fifth of its volume. The urine was acid and contained crystals of oxalate and triple phosphate of lime. Pressure over the right side of the abdomen caused slight pain; not so over the left. There was fulness and resistance on the right side of the abdomen and in the right loin. There was no indication whatever of bladder—prostatic, urethral, or testicular. As there was a good deal of hardness from muscular resistance over the right half of the abdomen, it was decided to make an examination under chloroform. Accordingly, on July 17th, an examination under an anæsthetic was made, and, with the abdominal walls relaxed, there was felt a large firm tumour of somewhat rounded outline in the right renal region. It was readily moved between the two hands placed one in front and one behind. It reached to within an inch of the linea alba, an inch and a half above the umbilicus; and with the finger tip in the depression of the umbilicus we could touch very readily the inner boundary of the tumour not far from its lower limit. The lowest edge of the tumour was just above and behind the anterior superior spine of the ilium. The liver did not descend below the costal margin. There was resonance all over the front of the tumour as well as above and below it; there were dulness and considerable resistance in the loin.

On Aug. 2nd, Dr. Hamerton and Mr. Coward assisting, and Mr. Norton giving the anæsthetic, I made an oblique incision in the ilio-costal space. Several tough layers of nuventitious tissue, thickening the proper capsule of the kidney, had to be divided before the renal substance was reached. Then a trocar and cannula, grooved on the side, so as to act also as a director for the scalpel when incising the kidney, were introduced; and on withdrawing the trocar, first of all a little bright blood and then a stream of thick creamy pus escaped. On pushing the trocar into the kidney the resistance was very considerable, and suggested its transit through a tough fibroma. After incising the kidney substance to the length of an inch or more, the right index finger was passed into the pelvis of the organ, and a small, movable, irregular-shaped calculus, weighing twenty-six grains, with sharp angles, was felt and extracted. The renal pelvis was large and sacculated, and was everywhere coated with a thick layer of soft phosphatic deposit. The kidney tissue traversed by the finger seemed very thick, and felt extremely hard, but no other calculus was exposed beyond the very abundant soft calculous deposit lining the pelvis and calyces. With an irrigator a great deal of this deposit, as well as a quantity of soft pyogenic membrane, were washed out. Two large drainage tubes were fixed in

the kidney, and the external wound was closed and covered with iodoform and cotton wool.

The relief experienced from the operation was immediate and complete, and the patient made an excellent convalescence, so that by the end of the month the wound was completely healed, excepting for a narrow track in the course of the drainage tubes. The chief part of the after-treatment was ably conducted by Mr. S. Mills and Dr. Hamerton. During the first week a quantity of pus and blood-stained urine escaped by the wound, and the dressings required to be changed three or four times a day, but no phosphatic concretions were washed out after the first twenty-four hours from the operation. The amount of urine voided naturally varied from twenty-six to thirty-six ounces in twenty-four hours. There was no appreciable amount of pus in it from the time of the operation, but blood was mixed with the urine passed for the first twenty-four hours. During the following fortnight, several small fragments of phosphatic calculus, which looked as though they had been shed from the surface of a larger calculus, were washed or picked out of the track of the drainage tubes. There was but a mere trace of pus in the urine, and very slight discharge from the sinus, and yet the kidney remained much harder and larger than natural. Moreover, on passing a probe down to the kidney along the sinus in the loin, quite a little quarry of calculous matter was felt. On Sept. 3rd, with Dr. Hamerton's help, I made an incision through the central half of the scar down to the kidney, when about two drachms of thick pus escaped, and a large mass of stone tightly embedded in the renal tissue was felt. The kidney was firmly fixed in the condensed cellular tissue of the loin, and the cavity of the kidney was

FIG. 3.



quite small and contracted. The renal substance held firm hold of the calculus, from which, with much difficulty, it was extracted in two large fragments, as shown in the narrow part of Fig. 3. The enucleation of the calculus was effected partly by incision with the knife, but chiefly by a teasing process with the finger tip and nail. The hæmorrhage was free, but soon ceased on temporarily plugging the wound with a sponge. The wound was closed by sutures, and a single drainage tube was inserted. There was a good deal of shock during and for a few hours after the operation, but the patient rallied well. The calculus weighed 334 grains. On Sept. 17th it was noted that the tumour, which could be felt up to the time of the second operation, had disappeared. After this date I did not again see Mr. D——, but for a week or two longer he continued under the care of Mr. Mills and Dr. Hamerton, and was then sufficiently recovered to quit London for his home in Wales. Dr. Hamerton has had news of him from time to time since, and in February last ascertained that Mr. D—— was feeling well and going about with comfort, and said that, "so much benefit had he obtained from the operation, that he would readily go through it once a year rather than suffer as he used to do before it." There is still a little pus in the urine.

Remarks.—The most noteworthy features of this case are—(1) the entire relief of all active symptoms by the removal of the smaller calculus, although the larger one remained behind in the kidney; (2) the different composition of the two calculi; and (3) the complete manner in which the large calculus was embedded in and covered by the renal substance, so that the finger could be passed into the renal pelvis without touching its surface. I am, however, disposed to think that part of this larger stone must have been felt and mistaken for calculus deposit on the surface of the renal pelvis. That there was an abundance of such a coating within the kidney there is no doubt, but this case teaches us to thoroughly remove in future any such deposit, and, further, to closely inquire by incision or probing into the nature of any abnormal hardness or resistance in any part of the kidney. I think it is not difficult to explain the complete freedom from pain and the marked diminution in the pyuria which followed the first operation; for the small stone was well calculated, from its sharp angles and its free mobility, to excite and keep up pain and suppuration within the renal pelvis.

CASE 4. *Nephro-lithotomy for oxalate of lime calculus in the right kidney of a woman; symptoms of two years' duration; recovery.* (From notes taken by the dresser, Mr. D. Lawson.)—Alice H——, aged twenty-one, a housewife, was admitted into the Middlesex Hospital on Jan. 10th, 1888. She has a spare figure, and is a healthy-looking brunette, with a somewhat florid complexion. For two years she has had smarting pains all over her abdomen and considerable pain on passing urine. During the last thirteen weeks she has been in continual pain in her right loin, and in the right side of the external genitals. She has had frequent morning sickness, and her urine has been thick, depositing much sediment. There has been no increased frequency of micturition, but she has passed more urine than natural to her, and has at times had pain in doing so. The pain has been aggravated by walking, and very much so by riding in omnibuses. For five weeks past she has kept her bed, but without benefit. On admission she complained that the pain in the right loin was still considerable, and increased by movement. She described it as being of a spasmodic character, starting in the loin and shooting along the crest of the ilium and down to Poupart's ligament and the pubes. She can often relieve the pain by drawing up the right thigh. She has also pain in the urethra on passing urine, but this is less severe now than it has been sometimes. There is much tenderness on pressure over the loin, but no swelling or hardness can be detected. There is increased resistance on pressure of the muscles of the right side of the abdomen. Morning sickness occurs two or three times a week, but not to so bad a degree as a month ago. Specific gravity of urine 1022; acid; containing a trace of pus, but no blood or crystals.

A few days after admission there was a little pus and a very large number of minute oxalate of lime crystals in the urine. Its average daily quantity for four days before operation was thirty-six ounces.

On January 18th, when the patient was anæsthetised, I could distinctly feel a limited hardness, which I took to be a calculus in the kidney, when the loin was well supported with my left hand and my right pressed firmly down over the kidney in front. I next sounded the bladder, and, finding nothing there, with the assistance of Mr. Nash, my house-surgeon, and Mr. D. Lawson, the dresser of the case, I made an oblique incision in the right ilio-costal region. Owing to the firm and extensive matting of the cellular and fatty tissues in the loin, I could not distinguish the kidney either with my finger or eye. After searching for some minutes, I began to doubt if I should be able to make it out at all. However, feeling sure, from my manipulation of the abdomen prior to commencing the operation, that there was both a kidney and a calculus in the right loin, I determined on reaching with my finger in the wound the hard spot I had felt through the parietes. I therefore had the front of the abdomen thoroughly supported by the pressure of a small pillow, and with my finger-nail scratched through the tissues till I reached the surface of the stone. Then, with a probe-pointed knife passed along the finger, I divided the renal tissue over the back of the calculus. The stone was partly embedded in the substance of the kidney and partly projecting into the renal pelvis. It was now freed all around by pressing the kidney tissue off it by the index finger, and then seized and removed with a suitable pair of forceps. A small quantity of pus and blood followed the extraction of the stone, the pus having a very offensive fæcal odour. The kidney could not be brought into view, but to the touch it felt hard and shrunken, with a moderate thickness of secreting substance and a small but somewhat sacculated pelvis. The calculus smelt horribly, and retained its foul odour for days after exposure to the air. It was blackened in places as if from discolouration from putrefaction round about it. Its general outline was oblong, with a rough irregular process projecting from the middle of its

body. When dry it weighed 109 grs., and Mr. W. Foster reported that it was composed of oxalate of lime. (Fig. 4.) The cavity of the kidney was irrigated with a weak solution of perchloride of mercury, and a large drainage tube was

FIG. 4.

retained. The external wound was brought together by superficial and deep sutures and covered with iodoform and cotton wool.

For the first four days after the operation the discharge from the wound was very free, and consisted of a dirty brown fetid fluid, composed of blood and serum, and afterwards of dirty pus, having the same horrible odour that the calculus and pus at the time of the operation had. On the second day there was pain and œdema about the front part of the wound, so that the sutures were removed and some blood-stained pus escaped from the front angle of the wound. After the fifth day the wound did well, but continued to discharge a quantity of healthy inoffensive pus. Scarcely any urine escaped by the wound. The urine passed naturally, was of sp. gr. 1021, acid, and without blood or pus. During the first twenty-four hours only eleven ounces were voided; for the first fortnight the daily quantity of urine varied from twenty to forty ounces; afterwards and up to the date of her discharge it amounted to from twenty-eight to sixty-four ounces, averaging from forty to fifty ounces. In character it was of sp. gr. 1013 to 1020, acid, and contained no blood, occasionally lithates, and sometimes a varying quantity of pus.

The patient was completely relieved of all pain from the time of the operation, and her general health became excellent. Some suppuration, however, continued in the planes of the abdominal parietes, and on March 1st an opening had to be made in front of the wound. She left the hospital at the end of the seventh week, but with discharge still going on.

FOREIGN BODY IN THE RIGHT BRONCHUS.

BY WALTER J. KILNER, M.B., M.R.C.P.L.

E. K——, aged ten years, was first seen by me on Dec. 30th, 1886. The child was then complaining of malaise and a slight dry cough. She had been feeling chilly, and was sitting over the fire. She was very hot to the touch, and the thermometer registered 105°. Physical examination revealed only a slight patch of dulness and tubular breathing at the back of the chest just below the spine of the scapula on the right side. There was bronchophony, but no crepitation. This did not seem sufficient to account for all the hyperpyrexia, but, from previous experience, I knew that her temperature was liable to rise out of all proportion to any discoverable cause, which I attributed to her having had malarial fever in India. On the following morning she appeared better. Her temperature stood only at 101·2°, but it rose in the afternoon to 105·6°; five grains of sulphate of quinine were therefore administered. Next day, the morning temperature was 99·1°, rising to 104·6° in the afternoon; and another dose of quinine was given. Now, for the first time, I learnt there might possibly be a foreign substance in the bronchus, this information being gained only after repeated questioning, as her friends thought such a thing impossible. The supposititious history, which subsequent events proved to be correct, was that on Dec. 20th she put a clove into her mouth, when one of her brothers, who was playing with her, made her laugh, and she inhaled it into the right bronchus. She immediately had a severe fit of coughing and a dart of pain in her right side; afterwards she had a frequent but slight cough. Although not feeling well, she was able to go to a Christmas party, and her mother attributed her indisposition to one of her frequent bilious attacks. By this time the case resolved itself into one of three things—(1) an ordinary attack of croupous pneumonia, with the symptoms coloured by malarial taint; (2) acute phthisis; (3) a foreign body in the bronchus. Although at this time undecided, I leaned to the last supposition. Two days subsequently Dr. Ord arrived at the same conclusion, and was inclined to think the mischief in the lung to be caused by a foreign body. She was taking bromide of potassium with tinctures of hyoscyamus and cinchona. Up to Jan. 4th no change had taken place in her lung, except that there was an increase of viscid phlegm. About 1 o'clock P.M. a rigor set in, lasting about half an hour. At 3 P.M. Dr. Ord saw her, by which time the inflammation had risen as high as the third rib, back and front. Her temperature during the day was as follows: 2.30 A.M., 100·8°; 8.45 A.M., 102°; 10.45 A.M., 101·4°; 1 P.M., 104° (chill); 5.15 P.M., 104·8°; 7.45 P.M., 104·4°; 10.15 P.M., 104·6°. The pulse-rate was 130 when perfectly still, but with the slightest movement it bounded up to 140 or 150, or even more. The daily chart was almost an exact repetition from Jan. 3rd to the 11th inclusive, the highest temperature recorded being 105·2°, and the lowest 100·8°, the maximum being attained between 4 P.M. and 5 P.M., while the minimum occurred at about noon each day.—Jan. 5th: This morning the inflammation had invaded the whole of the lung, there being dulness all over the right side of the chest, back and front. The cough was more troublesome, and there was a larger amount of expectoration, which was now rust-coloured. The child was weaker in every respect. She had a chill about 1 P.M.—6th: All doubts as to the cause of the illness were dispelled to-day, because during the night she coughed up a minute portion of the side of the calyx of the clove. This was too small to have been recognised for a certainty with the naked eye, but under the microscope (one-inch objective) the glandular structure, although much swollen, was easily distinguished, especially when compared with a piece from another clove.—7th: The expectoration, now muco-purulent, was greatly increased in quantity, and at times fetid. To-day she began inhaling steam impregnated with oil of eucalyptus, which was continued until May. The number of inhalations in the day depended upon the secretion and cough. This had the desired effect of removing the smell and taste from the phlegm. Chills occurred both yesterday and to-day, each at the same time (1 P.M.). About 10 P.M. she had a pleuritic stitch just below the spine of the scapula. A mustard poultice was applied over the seat of pain for about half an hour, but it unfortunately caused three blisters, which were a long time healing.—8th: Another small piece of clove coughed up. This time it was a portion of the petal. She brought up no other pieces until Oct. 12th.—11th: She had another rigor at 1.30 P.M. The cough had become almost incessant. The child was clearly getting weaker day by day. Owing to her low state brandy was given her at short intervals.

From Jan. 12th until the 26th inclusive her temperature was more constant, the variations ranging, as a rule, between 102° and 103°; although occasionally it fell a little lower and when this happened it was between 8 and 10 A.M. Her strength failed fast, until she could only raise herself in bed with assistance, and even turning was almost beyond her power, causing her pulse to run up to 150 or more. She had constant delirium, picking at the bedclothes, but could always be roused to consciousness. She was able to take a fair amount of nourishment, and her spirits were remarkably good when she was not delirious. There was, however, a slight change for the better in the lung, but only at the apex, back and front. The cough, on the whole, was lessened, and sometimes the expectoration would almost cease for twenty-four or forty-eight hours, and then there would be a violent and continuous fit of coughing, with a copious expectoration, consisting of nearly pure pus, while at other times it was only muco-purulent. These attacks commenced with an increased feeling of feverishness and flushing. Shortly after this occurrence a slight gurgling might be heard over the fourth intercostal space, about three inches from the spine. They took place on Jan. 17th, 19th, 22nd, 23rd, 25th, and 27th. On the last-mentioned day she had another rigor about noon, when her temperature ascended to 103°, but fell again to 100·8° at 4.30 P.M., after voiding a good deal of pus. Her strength was lowest on this and the previous days. On the 20th she began to take bromide of potassium and citrate of iron and quinine. On the 28th the late Dr. Wilson Fox saw her, but could not suggest anything. He incidentally said that operative measures must on no account be thought of in this case. From this date

until Feb. 2nd inclusive, the temperature kept between 101° and 102°; pulse, when perfectly quiet, about 120. No alteration in lungs or cough.—Feb. 3rd to 8th: Morning temperature now normal, while it rose to between 100° and 101° in the evening; the pulse became slower and firmer, 100 to 112. Her cough was not so troublesome, and the expectoration decidedly lessened immediately after the addition of sulphate of atropia to the mixture on Feb. 2nd. She also gained strength, and was lifted from her bed to a couch on Feb. 6th. There was also an improvement of her lung anteriorly, but none posteriorly.—9th to 20th: The temperature chart showed a marked change. The temperature at about 8 A.M. was the lowest, ranging between 99° and 100°; while there was a rise commencing about 10 A.M. and reaching the highest point somewhere about 4 P.M.; subsequently a decline took place, but never so low as in the morning. The highest point varied, but rose each day until it reached a maximum on Feb. 17th—viz., 104°; pulse 120 to 130. With the daily rise she became restless, more or less prostrate, and had a bounding pulse, while she improved as the fever left her. On the 19th quinine and hydrobromic acid were prescribed.

On and after the 21st she steadily gained strength. As a rule she had one coughing fit in the morning upon awakening, and during the day only at intervals, the attacks being on the whole less violent. The amount of phlegm was considerably reduced, often hardly any. However, no further resolution of the lung took place. Almost invariably there was a rise of temperature to about 100° some part of the day, but at no stated time. She improved so much that she was carried downstairs on March 5th; but on the 11th she had another febrile attack, with a daily recurrence until the 20th. They were similar to the previous ones. Her bowels at this time became obstinately constipated, and she had to take aperients frequently. She went out in a Bath chair whenever the weather allowed. On April 13th she went to Bournemouth, and bore the journey well. While at the seaside she gained flesh and strength, and was able to walk about a little. She lived in the open air as much as possible. Nevertheless she had a daily rise in temperature often as high as 102° or 103°. On May 12th she returned to London greatly improved, stronger, and better. Her lung had also benefited anteriorly; the dulness had disappeared; respiration was healthy, with the exception of being slightly feeble. Posteriorly, above the level of the spine of the scapula, the respiration was enfeebled, but otherwise healthy. Below, there was marked dulness and only tubular respiration, except over the cavity, where there was a blowing, dry sound. No râles of any description. There was bronchophony, and occasionally a dry cough.—Aug. 4th: Until now the child had been appearing well. She had a fair amount of strength, and could walk some distance, only coughing occasionally. She had a violent hæmoptysis to-day, evidently excited by a game of cricket with her brothers yesterday.—6th: I saw her for the first time to-day, as I had been away from home. She was much pulled down, coughing incessantly, and expectorating a large amount of phlegm mixed with blood every time she coughed. Large moist râles and gurgling were to be heard in the neighbourhood of the cavity. Temperature 103°; pulse 120, very thready. She was ordered to take gallic acid, ext. ergot. liq., and tincture of hamamelis.—7th: Phlegm almost free from blood.—8th: She had a slight return of hæmorrhage in the evening, attributable to the excitement of seeing her father, who had just returned from India.—10th: From this date there was a gradual but slow decline of temperature, and on the 20th and following three days it became subnormal, subsequently remaining normal. The pulse became less frequent and of greater volume. The cough continued troublesome, the amount of phlegm being very large, and on the 12th it turned quite purulent. It, however, decreased after the 15th, and later on there was only an occasional cough, with the exception of a coughing fit accompanied by phlegm when she first woke in the morning. As the phlegm became fetid, on the 12th she returned to the inhalations of steam and eucalyptus oil several times a day. This removed the foul smell and taste. The quantity was lessened by a mixture containing sulphates of iron and magnesium with atropia. The child was very emaciated and prostrate.—29th: This attack had caused a slight enlargement of the cavity, but there seemed to be no further change in the lung, the mischief being much less than could have been expected. To-day she went to Walton-on-the-Naze. Here she was able to go out in a chair and sit in the open air nearly every day, and regained sufficient strength to walk a little. During the last attack her appetite failed, and in order to let her have as much nourishment as possible raw mixed beef was given her in wine twice or three times a day, and this was continued as long as she was in England.—Sept. 12th: To-day she had a slight shivering fit, and there was a daily increasing rise of temperature until the 17th and 18th, when she had another slight hæmorrhage and an increase of expectoration. This soon passed off, and she picked up a little during the week, but there was a return about the 23rd or 24th, and the hæmorrhage became severe on the 25th. She was brought back to London on the 26th, and bore the journey well, but in the evening she had a slight return of the hæmorrhage, and a slighter one two evenings afterwards. In the interval between these attacks she had a constant hacking cough, expectorating phlegm and blood each time. She partook of ice freely, craving for it, as it eased her cough more than anything else. Her temperature at this time was between 102° and 103°; the pulse ranged from 120 to 130, and was very feeble. She had become exceedingly emaciated, weak, and low-spirited.—28th: She began to rally. There was a gradual decline in temperature and more strength in her pulse. The phlegm became purulent, but it decreased with her bodily improvement.—Oct. 4th: Her temperature had again become normal, and on the 6th she was carried downstairs.—11th: She had a slight rise of temperature in the evening (100·6°), but went to sleep at the proper time. Between 3 A.M. and 4 A.M. on the 12th she woke and had a fit of coughing, not very severe, but in the expectoration was found the offending clove almost entire, the petals, however, being in shreds.—17th: The change in the lungs during the last five days was simply marvellous. Vesicular murmur was heard all over the back. Below the level of the fourth rib there was still dulness, but not so intense. The cavity was of course increased in size, but was not nearly so large as I expected to find it. The cough was mostly gone, and the child looked better and stronger. On the 18th she started to Liverpool *en route* for India, reaching Port Said on the 29th and Bombay on Nov. 19th.

The case is interesting, not merely on account of the length of time the clove remained in the lung (296 days), but from the difficulty at the commencement of discovering the cause of the illness. The diagnosis would have remained doubtful until the very end except for the assistance of the microscope, as the particles of the clove coughed up were too small to have been recognised for certain by the naked eye. It is also curious why the inflammation should at first have been so limited, and then to have spread as rapidly as it did. This seems the more remarkable when we consider the irritant nature of the foreign body. Was it that the essential oil acting as a superficial caustic prevented any further action? The limitation of the inflammation to the posterior lobe after the resolution of the anterior and middle lobes is interesting, although what might have been expected. Other points worthy of notice are the long period of quiescence during which the child gained strength and the little inconvenience she felt. It seems probably due to this fortunate circumstance, that the child was enabled to pull through the later relapses. It appears extraordinary for the clove to have remained in so perfect a state during its long sojourn in the lung. The want of knowledge as to how much the clove had been chewed and how large a piece had been inhaled led me to imagine that, as the child regained her strength, the clove had been disintegrated and brought up in such minute particles as to escape observation. A question very difficult to answer is whether in the early part of the illness the regular variations of temperature preceded by a chill were pure and simply "hectic," or whether they depended upon malarial taint. I think the latter had a great deal of influence—first, because the appearance was early for hectic fever, especially as there was no drain upon the system due to a large amount of phlegm; and, secondly, because in previous slight illnesses there had been a similar tendency.

PROVINCIAL HOSPITAL SUNDAY COLLECTIONS.—The net proceeds of the collection made at Hemel Hempstead on the 10th inst. in aid of the West Herts Infirmary amounted to £28 3*s.* 7*d.*, which has been paid over to the infirmary. On the 3rd inst., at Shrivenham, Berkshire, a sum of £11 11*s.* 6*d.* was collected towards the funds of the Victoria Hospital at Swindon.

THE

TREATMENT OF TUBERCULAR DISEASE OF THE KNEE JOINT BY ARTHRECTOMY.

BY BILTON POLLARD, B.S., F.R.C.S.,

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(*Concluded from page 1187.*)

IN the following three cases the H-shaped incision with transverse section of the patella was employed.

CASE 7.—W. H——, aged seven years, was admitted on April 30th, 1887. The disease began after a fall on the left knee, three years and a half previously. He had attended as an out-patient since then, and was at first treated by fixation of the joint in plaster-of-Paris, and subsequently by a Thomas's splint. On admission there was a sinus behind the knee and an abscess over the head of the fibula. On May 7th arthrectomy was performed; the abscess was evacuated and the sinus scraped; the articular cartilages were much diseased. The patella was sutured with chromicised catgut. No tubes were used. The dressing of salicylic and sal alembroth wools was applied before the tourniquet was removed. The limb was elevated for twenty-four hours. The temperature rose, reaching 104·2°. On the following day the wound was opened and tubes inserted; the temperature then fell, but the edges of the flaps sloughed, the joint suppurated, and an abscess formed in the thigh; the joint granulated, and on July 27th it was healed, but the scar was adherent to the patella. On Sept. 24th the patient was readmitted, when the scar was excised, and healthy skin brought over the front of the patella. The joint has since remained sound.

CASE 8.—T. A. L——, aged five years, was admitted on Jan. 10, 1888. The disease began five months previously, and two months afterwards an abscess at the upper and inner part of the joint was opened at the London Hospital. There was a family history of phthisis. On admission there was much swelling of the soft tissues, flexion of the joint at a right angle, and a sinus leading to the upper and inner synovial pouch. Weight extension was applied. On Jan. 21st arthrectomy was performed. The synovial membrane was much diseased and almost covered the articular cartilages; a sinus led into the inner condyle, the interior of which was almost entirely occupied by caseous tubercle. The synovial membrane was removed; the ligaments and the articular cartilages were cleaned; the inner condyle was scraped out, and an opening was made through its inner wall for drainage. The inter-articular cartilages were removed. The bleeding was dealt with as in Case 2. A tube was placed in the inner condyle, and another in the upper and outer synovial pouch. The patella was sutured with silk. The wound was dressed with boracic acid powder and sal alembroth gauze and wool, and a Thomas's splint applied. The temperature occasionally rose a degree above normal at night, and on the thirteenth day it reached 100°. The dressing was changed on the fourteenth day, and the tubes were removed. Some of the sutures on the inner side of the joint had given way, and there was a stain of pus on the dressing. The wound was again dressed on the twenty-eighth and also on the forty-ninth day, when the wound was healed, with the exception of a small granulating wound over the inner condyle. There was a small abscess beneath the middle of the transverse scar; this was opened and scraped, and a silk suture was removed. The joint was soundly healed on April 10th, and the patient was discharged.

CASE 9.—L. R——, aged three years, was admitted on Feb. 28th, 1888. The disease began in May, 1887. A Thomas's splint was applied in August of that year. The child had scarlet fever in the following December. On admission, the knee was flexed at a right angle, and the tibia was displaced backwards. The splint had been removed at the Fever Hospital. On March 1st, 1888, arthrectomy was performed. The synovial membrane was dissected off the capsule and articular cartilages, and pits in the latter were scraped; the remains of the inter-articular cartilages were removed; the crucial ligaments were cleaned and left. The bleeding was dealt with as in Case 2, and drainage was provided for as in Case 3. The patella was sutured with stout silk. A dressing of boracic acid powder and sal alembroth gauze and wool, with a metal back splint included, was applied. The temperature remained normal. The dressing was changed for the first time on the twenty-first day, the wound being healed where it had been sutured, and the unsutured portions being covered by dry crusts. The joint was dressed again on the thirty-first day, when it was found to be soundly healed, and the patient was discharged, wearing a Thomas's splint.

The extent of the disease in each case amply warranted some radical treatment. In all the cases the synovial membrane was greatly thickened, and contained cheesy foci. In four there was extensive tubercular disease of the bones; and in three others the articular cartilages were diseased. In all, the disease was progressing so rapidly that some operation was necessary, and, considering the early age of the patients (four were three years of age, one four years, two five years, and two seven years), the final results of excision would have been most pitiable. Thanks to improved methods of treatment, there is no reason to anticipate failure in the growth of the limbs in the cases I have recorded. In addition to the free exposure of the cavity of the joint and the complete removal of the diseased tissues, which should be as deliberately dissected from the muscles, ligaments, and bones as in an anatomical dissection, there are two points which deserve the greatest attention: One is to reduce the loss of blood to a minimum, and the other is to secure absolute rest during the healing process. All loss of blood during the operation can of course be avoided by means of Esmarch's tourniquet, but a great deal may be lost when the tourniquet is removed in order to secure the ends of bleeding vessels, for there is always a very free oozing of blood from the numerous small vessels which have been divided. In order to obviate this, Esmarch has advised the application of the dressing with firm pressure before the tourniquet is removed. Since the introduction of wool dressings this method has been employed with much success, especially in combination with vertical elevation of the limb, which has been shown by Lister to cause very marked contraction of the arteries. But even with these precautions a good deal of blood may be lost by soakage into the wool. The method employed in most of the cases recorded above was as follows. After the removal of the diseased tissues the tourniquet was taken off for an instant, and all the spurting vessels were clamped. The tourniquet was then quickly reapplied so as to check the oozing of blood during the remainder of the operation, which was completed after the clamped vessels had been tied. The wool dressing was applied with a moderate degree of pressure, and the limb raised to a right angle with the body. The tourniquet was then permanently removed. In order to secure perfect rest during the healing process an efficient splint must be applied, and it matters little whether this be a Thomas's knee splint, a metal back splint included in the dressing, or plaster-of-Paris applied outside the dressing. Either of the two former methods have the advantage that, if the dressing needs removal before the joint is healed, it can be readily effected. But to secure perfect and prolonged rest, an attempt should be made to obtain healing under a single dressing. To achieve this result drainage tubes should be dispensed with, for their employment necessitates a change of the dressing for their removal; and, provided that the joint be thoroughly aseptic, ample drainage may be secured by leaving a portion of the wound unsutured on each side of the joint. This plan was adopted in five of the cases, with the best results. If the temperature rises, however, or if the joint is painful, the dressing should be at once removed, and, if necessary, tubes should be inserted.

Two modes of laying open the joints were employed. In six cases the curved incision passing across the joint and dividing the ligamentum patellæ was adopted. In five of these the wound healed by first intention without suppuration; the sixth patient died either from septic infection or iodoform poisoning. In three cases the H-shaped incision, with transverse section of the patella, was employed; of these, one healed by first intention under a single dressing; one suppurated a little around a suture in the patella; and one broke down and suppurated freely; but all ultimately did well. Whichever incision be used, it is essential that the lateral cuts should extend to the top of the synovial pouches, in order to allow of thorough removal of the synovial membrane. Volkmann's method by division of the patella appeared to me preferable, as bone unites

more firmly than ligament. The wound is, however, more complicated, and in my experience does not heal so well as the curved incision through the ligamentum patellæ.

It is interesting and important, from an economical point of view, to note the success of permanent wool dressings in these cases. In six cases there was absolutely no suppuration. In five of these no tubes were used, and in two of them the first dressing was not removed for six weeks; in one it was changed at the end of four weeks; and in another at the end of three weeks. In one of the six cases tubes were employed. The dressing was changed and the tubes removed at the end of three weeks; at the second dressing, more than five weeks later, the joint was soundly healed. In three cases suppuration occurred, but in two of them the dressings were removed on the day after the operation and tubes inserted, as the temperature was high. In the third case, which suppurated, tubes were employed from the first; the amount of pus was very slight, only a stain on the dressing, which was changed for the first time on the fourteenth day, and the third dressing did not require removal until the forty-ninth day after the operation.

The ultimate results cannot as yet be stated, but the present condition of the patients is very satisfactory. Five of the children had perfectly sound joints after periods of eleven and a half, nine, seven and a half, seven, and six and a half months after their respective operations; and in only one of the nine cases has there been any recurrence of the disease. The patient referred to has a tubercular focus in the scar; but he has also, since the operation, developed tubercle of the cervical spine, and the same disease in his lungs has extended.

The greatest drawback to the operation is the tendency to flexion at the joint, which occurs after artificial support is left off. In order to check this, the patients whose cases are now recorded are, at periods ranging from seven to twelve months after their operations, still wearing Thomas's splints. It remains to be seen how far the increased strength of the front of the joint, which is secured by the transpatellar operation, will counteract the tendency to flexion.

CASE OF

TOTAL EXTIRPATION OF THE LARYNX FOR EPITHELIOMA.

BY WILLIAM GARDNER, M.D., C.M. GLAS.,
LECTURER ON SURGERY, ADELAIDE UNIVERSITY; SURGEON TO ADELAIDE HOSPITAL.

WM. H——, aged sixty-two years; married; born in Germany, and residing at St. Kilda, Victoria. The following notes were taken by Dr. Joske, of the Alfred Hospital, Melbourne, on Oct. 1st, 1887:—"The patient states that he was quite well until nine months ago, when he first complained of a wheezing in his chest, and gradual loss of voice. He then consulted Dr. Cox, of Alfred Hospital, Melbourne, who diagnosed a smooth growth below the left cord, and gave advice which was not carried out. The voice returned for about four months, and then he lost it again. Has never had any difficulty in swallowing, but has always expectorated phlegm. For the last month he has had persistent cough, could not lie down at night, and has had attacks of spasm. He had previously enjoyed good health. Father died at the age of forty; mother still alive. One brother died of cancer of the liver. He has eight children."

There has been progressive emaciation, the patient having lost 18 lb. in nine months. Is pale and flabby in complexion; lungs resonant; heart sounds normal. Laryngoscopic examination showed a small ulcer below the left vocal cord. There was absolute evidence that no syphilitic taint could be present.

Being on a visit to Melbourne, I was asked by my friend Dr. Cox to see the patient with him, and after examination concurred in the diagnosis of cancer. Dr. Cox then removed with the laryngeal forceps a small portion of the growth, which was forwarded to Professor Allen, who pronounced it to be an epithelioma. We then advised the patient to have his larynx removed, explaining carefully to him all the risks and disadvantages attendant upon such an operation. After consultation with his friends, Mr. H—— decided to have the operation done, and at Dr. Cox's suggestion I was invited to perform the operation in Melbourne.

On Dec. 2nd the patient was placed under the influence of chloroform by Dr. Power of St. Kilda, Dr. Cox and Dr. Joske kindly assisting me with the operation. An incision was made in the median line from the hyoid bone to the second ring of the trachea, and the tissues were gradually dissected back from the sides of the larynx. On the right side the superior cornua of the hyoid bone was dissected out, and the left was cut through at the base, as the light was bad on that side of the patient. The fascia attached to the thyroid cartilage was set free without dividing the thyro-hyoid membrane. Pressure-forceps were applied to all bleeding points, and general oozing was reduced by the application of hot sponges. The trachea was then divided between the cricoid and its upper ring, but owing to calcification of the cartilages the rectangular tube which I had used in my previous case could not be inserted. A large tracheotomy tube was then introduced, and the larynx dissected up from the œsophagus and removed, the epiglottis being cut through at its base. The superior thyroid arteries were caught up by forceps and tied before complete separation was effected. The wound was dusted over with iodoform and covered above the tube with absorbent wool. The tube was then fixed securely with tapes. The time occupied by the operation from the commencement of the administration of chloroform was fifty-five minutes.

At 7 A.M. on the following day the tube became blocked and the patient was almost moribund. Dr. Joske, with admirable presence of mind, sucked the tube and performed artificial respiration. The patient soon rallied, and nothing of any importance occurred in the further progress of the case. On the same day he was fed by a tube inserted into the opening in the œsophagus, and nutrient enemata were also administered. On Oct. 10th he first took jelly by the mouth, and none came through the wound. On the 11th he was allowed out of bed. The highest temperature was 100·4°; the highest pulse-rate 100; the highest number of respirations 26. On the 23rd an artificial larynx made of silver was tried, but caused cough and pain, and was not left in position. From the 27th he took all his food by the mouth, and on the 30th he went out into the garden for the first time. On Nov. 15th Dr. Joske noted that he was getting fat and strong. On Dec. 25th he was able to go about the streets of Melbourne by himself. The upper part of the wound had closed, and he wore the large tracheotomy tube, which was cleansed twice daily. He could articulate sufficiently with his lips to make himself understood. There was no pain and no cough, and he had increased in weight. The further reports of the case continued good.

I cannot conclude without acknowledging the assistance which I received from Dr. Cox. The result of the after-treatment was largely due to Dr. Joske's unvarying attention and skilful treatment. Dr. Rankin of Saint Kilda was present as a visitor only, but I am indebted to him for valuable assistance. And lastly, but not least, Dr. Power's judgment in administering the anæsthetic could not be too highly commended.

I saw the patient towards the end of February last, and he was then fat and strong, and could communicate freely with those about by means of a loud whisper, which could be distinctly heard at a distance of several feet. Deglutition was perfect, and the upper part of the wound was entirely closed, and he felt so comfortable that he declined to have the wound reopened for the insertion of a vulcanite larynx which I had procured for him, and for which I was indebted to Drs. Newman and Woodburn of Glasgow.

Report on the larynx by DR. GILES.—The larynx was split into two portions by a straight vertical incision dividing the cartilages between the anterior and posterior attachments of the vocal cords, and the interior disclosed to view. All the cartilages of the larynx are in a state of almost complete ossification, the cricoid cartilage being especially dense and hard. Below the left vocal cord the soft tissues are seen to be infiltrated by a growth, the centre of which has broken down, leaving a rounded ulcer with hard irregular edges. The posterior part of the cord, in the situation of the processus vocalis, is almost ulcerated through. The mass reaches from the cord above to the lower border of the cricoid cartilage below, but is unilateral, the right half of the larynx being quite free.

The following are Professor Watson's post-mortem notes of the case of removal of the larynx published in

THE LANCET of May 7th, 1887: "The uppermost ring of the trachea, together with the sclerosed remains of the isthmus of the thyroid gland, was adherent to the skin at the lower part of the artificial opening, of which the borders were formed by a cicatricial blending of the skin with subjacent muscular and fascial planes. The free border of the pharyngo-tracheal septum produced by the operation was occupied by a fungating growth, continuous above on the right side with a vast and sloughy ulcer, which had destroyed the right posterior pillar of the fauces and tonsil, and also the right half of the epiglottis and glosso-epiglottic fossa, where at some distance behind the papillæ circumvalatæ its edge was abruptly thrown up, and a microscopic section from this part showed the same characteristic epithelial buds noticed in the portion of tumour originally removed (nine months ago) from the tracheal surface of the right vocal cord. The ascending pharyngeal artery and the trunk of the superior thyroid artery (in this case arising from the common carotid artery) and the lingual arteries, as well as the greater part of the styloid process and the whole of the greater cornu of the hyoid bone, lay exposed and necrotic where the muscular planes of the pharynx had been eaten through. The left half of the epiglottis hung loosely into the lumen of the pharynx. The external carotid artery, although not exposed, was much contracted, but neither it nor the internal carotid nor the internal jugular vein were plugged. Some of the lymphatic glands about the angle of the jaw on the right side were moderately enlarged, but not adherent to surrounding structures. The parotid on the same side was inflamed, but not suppurating; it showed also no indication of cancerous deposit. The lungs were emphysematous, with pronounced pigmentation and correspondingly inky bronchial glands, arachnoid-like pleural adhesions. In addition, the right apex showed a white cartilaginiform patch of thickening of its pleura as large as a shilling, which under the microscope presented a laminated fibrillar structure containing granules of black pigment towards its deep surface, but no signs of nucleation. In the interpleural space of the superior mediastinum there was a lobulated fatty tumour flattened out between the origins of the sterno-mastoid muscles in front and the left innominate vein and the trachea behind. It ascended some distance into the neck between the innominate and left common carotid arteries, overlapping the trachea at the sides. The heart and the arch of the aorta were healthy. The mediastina showed no signs of cancerous deposit. The abdominal viscera, examined through an incision in the diaphragm, presented nothing pathological.

"Death was evidently due to exhaustion, consequent on starvation, pain, and absorption from the ulcerated surface of the new growth, which appears to have spread upwards *per continuitatum* from a local recidive, rather than to have been a downward spread from a secondary deposit in the tonsil. The lipoma was of interest both from its situation and its contrast with the extreme emaciation of the rest of the cadaver. The question would naturally present itself as to how far, if at all, any of the *intra vitam* symptoms might be referred to its presence in the neighbourhood of the trachea and great vessels and nerves. Or it might be asked whether the tumour itself was not the outcome of a fatty substitution of the areolar tissue of the part following in some obscure manner on the removal of the larynx."

Remarks.—In my opinion, a radical operation for epithelioma should be complete, and therefore in both cases I extirpated the whole of the larynx, although in the second case it is just possible that partial excision might have removed the whole disease; but, as I considered that the chance of recurrence was diminished by total extirpation, I decided upon this plan of operation, although statistics would lead one to think that partial removal was less dangerous. A partial removal involves a preliminary tracheotomy, which I think is more dangerous than simple division of the trachea with the immediate insertion of a closely fitting rectangular tube, which prevents any blood passing downwards; and as this is done in the hanging head position, the risk is also diminished. Another advantage is that the administration of chloroform can then be continued through an indiarubber tube attached to the rectangular one and carried quite out of the line of operation. One of the great difficulties after the operation is to keep the upper part of the wound open for the insertion of the artificial vocal apparatus, and in my first case I had to resort to passing the finger up every second or third day to keep the passage open. In the last case the upper part of the wound closed entirely before the vulcanite larynx arrived, and, at the patient's request, I refrained from reopening the wound, and I am glad that I did so, as I believe that the presence of the artificial apparatus probably tends to keep up constant irritation and so leads to an earlier recurrence. In conclusion, let me add that our sunny climate, with its bright Italian skies, has largely conduced to my successful primary results, and that the foggy, damp climate of England is inimical to the success of similar efforts.

CARBOLIC ACID IN THE SUCCESSFUL TREATMENT OF ENTERIC FEVER.

BY F. SIDNEY GRAMSHAW, M.D.

THE use of carbolic acid in scarlet and enteric fever having been noticed twice lately in the columns of THE LANCET, I feel that the time has arrived for me to lay before the profession the results of an experience in its use extending over a period of nearly seven years, comprising a series of one hundred and sixteen cases of enteric fever. I only propose to deal in this paper with the treatment of the latter, as my attention has been more particularly directed to it.

Some years' clinical experience of enteric fever convinced me that neither the usual therapeutic nor the expectant treatment of the disease were at all satisfactory in their results; consequently, it was with much interest and appreciation that I read a note in Braithwaite's Retrospect of Medicine,[1] in which a Dr. Rothe[2] advocated the administration of carbolic acid in combination with iodine, to which he ascribed an intense antipyretic action. The pertinent questions put for consideration and solution, as to the reasons for this action, caused me to take careful notes and make constant therapeutic experiments, to discover if it was an invariable result that such marked benefit followed the use of these drugs. There are two principal causes of febrile disturbance in enteric fever, one being the presence of the typhoid bacillus, the other the local lesion in the small intestine. My experiments in the cultivation of typhoid bacilli, and the effect carbolic acid exerts on these micro-organisms when introduced into the cultivating media, are not complete or conclusive enough to be given here with confidence and scientific accuracy. That such specific bacilli exist, I have demonstrated to my own satisfaction. It is worthy of remark that healthy action is rapidly set up in old-standing ulcers of the leg when carbolic acid is administered internally in small doses, in addition to the rest, cleanliness, and bandaging usually resorted to for their cure. This I have known for a long time, and the knowledge helped to induce me to adopt Dr. Rothe's method. Many cases of abortive typhoid or simple continued fever are not included among the number of those I quote from my notes; although I am fully convinced that the medicine frequently causes the fever to be cut short in the second week. From the early summer of 1881 to the present date, one hundred and sixteen cases of enteric fever have passed through my hands, so I consider there are sufficient data to enable me to write on the subject with some authority. The mere fact of having so many cases, all treated alike, is of interest, without taking into account the successful results. Fully alive to the feeling that one is liable to a charge of empiricism who advocates the slavish use of a constant remedy, I take comfort in the idea that it would be just as reasonable to say this of those who treat cases of acute rheumatism with salicylate of soda.

To proceed without further preface, the following is a general description of the management, diet, and carbolic acid treatment of enteric fever. The patient is of course confined to bed, in a well-ventilated room if possible, and every effort is made to ensure that no particle of solid food of any kind is administered by over-anxious relatives. The diet is restricted to milk, toast-and-water, barley-water, and calf's-foot jelly; new milk is always insisted upon as the main support, from a quart to three pints being given

[1] Vol. lxxxii., p. 9. [2] Deutsch. Med. Woch., 11 and 12, 1880.

to an adult in the twenty-four hours. The carbolic acid is ordered in a mixture, of which this is the prescription: Take of carbolic acid (Calvert's extra pure for internal administration), twelve minims; tincture of iodine (B.P.), sixteen minims; tincture of orange-peel, one drachm and a half; simple syrup, three drachms; water to eight ounces: the dose to be an ounce every four hours for the first fortnight, or until the urgent symptoms yield, when the same dose is administered three times a day. The good effect is manifested almost immediately. In two days the pulse slows and gains in strength, the temperature falls, the tongue becomes moist, all diarrhœa ceases, and the general condition of the patient is so much improved that, as a rule, in a week all anxiety is at an end, and the case progresses quietly towards recovery. It sometimes happens that a case is cut short by this treatment as suddenly as is a case of acute rheumatism by the exhibition of salicylate of soda; but more generally the fever runs its course of thirty days before all danger of relapse is past, and I have found it better to continue the medicine until the thermometer shows no rise of temperature for three or four clear days. If the pulse at any time rises above 120, the temperature 105°, or if sordes form on the lips or teeth, either champagne or brandy, and sometimes both, are given every two hours. This, however, is rarely necessary. Complete abstinence from any kind of solid food until all traces of fever have disappeared is insisted upon, and when the patient does return to his ordinary diet, the resumption of solids is a gradual progress from soup to boiled sole, chicken, mutton, and soft vegetables. Beef-tea is carefully avoided so long as the temperature is abnormal, as it so frequently gives rise to troublesome diarrhœa. The carbolic acid combination is usually taken without trouble or difficulty. A day or two after commencing with it patients always complain that everything they take tastes of the medicine; this is unavoidable, and need give no anxiety, unless vomiting is excited, when it is a good plan to reduce the dose of carbolic acid and to add a small quantity of dilute nitro-hydrochloric acid. It is easy to detect the smell of carbolic acid in the breath and perspiration, but I have rarely noticed carboluria. It must also be noted that not only does diarrhœa cease, but the opposite condition—namely, obstinate constipation—is generally induced. Aperients are decidedly to be avoided; if the bowels do not act for some days, I administer an enema of warm soap-and-water, or of a small quantity of castor oil emulsified in warm water with the yelk of an egg. If after convalescence there is trouble in getting a regular evacuation, I give daily small doses of belladonna and salad oil.

I do not think the remedy owes its antipyretic action to a direct influence on the vascular activity through stimulation of the vagus or the cardiac ganglia, but I lean to Dr. Rothe's alternative opinion that this undoubted action is the result of the causes (mentioned in the early part of this paper) being gradually overcome and removed. I cannot prove that the presence of carbolic acid in the system either arrests the production or destroys the already produced typhoid bacilli, but I firmly believe this to be the case. I also consider that the ulceration in the intestine is prevented, and ulcers already formed are induced to heal rapidly. No other remedies have in my experience proved reliable. Sir William Gull thinks the common-sense method of treating enteric fever is by careful dieting and nursing, leaving drugs alone; but I am humbly of opinion that when medicine does what I claim for this combination, it is better to secure comfort to the patient and confidence for his friends by placing him in such a condition that in a few days he is on the high road to convalescence. I give stimulants without hesitation if necessary, and to assist recovery when a tonic is needed I prescribe bark and mineral acids.

Turning now to my note-book, I give a rough analysis of the 116 cases. Seventeen were children, ten adolescents, and the remaining eighty-nine adults, the sexes of the total number being about equally divided. They belonged to all ranks of life, and the surroundings of some of the poorer cases were not conducive to cleanliness or the possibility of good sanitary arrangements. *The result in every case but one has been complete recovery*, and that one fatal case calls for the explanation that death did not take place until long after the fever was over, and from quite an accidental and adventitious cause. This case (No. 25 in the series) is reported further on.

Here are the notes on one of the most recent cases (No. 114), which may be taken as a fair example of the average condition and progress of a patient submitted to the advocated treatment:—

E. C. S——, aged fifteen, the son of a clergyman, came under treatment on the evening of Sept. 3rd, 1887. He had been ill for more than a week, was much exhausted, and complained of diarrhœa, abdominal pain, headache, and thirst. On examination, his abdomen was found to be enlarged; there was pain on pressure, and gurgling in the right iliac fossa, profuse pea-soupy diarrhœa, typhoid tongue, pulse 110, and a temperature of 103°. He had just returned from staying at a country house some distance from home, where there had been a case of enteric fever recently. He was ordered the carbolic and iodine mixture, with twelve minims of the former and sixteen minims of the latter to eight ounces of water, with the orange syrup; an ounce to be taken every four hours. Diet to consist of new milk and small quantities of toast-and-water.—Sept. 4th: Much the same. Morning temperature 101·8°, evening 103°; pulse 110.—5th: Morning temperature 101°, evening 102·5°; pulse 100. Diarrhœa checked; only one stool. Several typhoid spots on chest and abdomen. Consider this is the tenth day of the fever. Takes milk freely, and is now well under the influence of the carbolic acid, which is exerting its usual antipyretic effect.—6th: Morning temperature 101°, evening 102·5°; pulse 100. One very scanty stool. Complains of thirst.—7th: Morning temperature 101°, evening 102·8°; pulse 96. Suffers from pain in the right abdomen; to have warm flannels sprinkled with laudanum applied.—8th: Morning temperature 100·8°, evening 102·5°; pulse 96. Says he feels better. No action of bowels.—9th: Morning temperature 100·8, evening 102°; pulse 96. No stool.—10th: Morning temperature 100·5°, evening 102°; pulse 94. No action of bowels; friends anxious about this. Administered a simple enema of warm water and soap.—11th: Enema acted this morning; moderate stool, bran-mash-like in character. Morning temperature 100°, evening 101·5°; pulse 92.—12th, 13th, and 14th: Pulse and temperature as on the 11th; both have now reached the usual level, which is maintained. Some fresh spots noticed.—15th: No action of bowels since the 11th. Gave another enema, which acted in four hours; evening temperature 101°; pulse 86.—16th, 17th, and 18th: Pulse each day 84; evening temperature 100°. To have (on the 18th) an enema of yelk of egg, castor oil, and water, which acted satisfactorily. Takes the mixture regularly day and night.—19th: Morning temperature normal, evening 99°.—20th: Steadily improving. Not much appetite for milk. To have cocoa. Very tired of the carbolic mixture. Bowels acted twice.—21st: Continues to improve. Temperature normal; pulse 78. No pain or discomfort. To have a cinchona mixture with nitro-hydrochloric acid.—22nd and 23rd: Improvement continues. Allowed some soup.—24th: To have some boiled sole.—25th: To have very thin bread-and-butter and boiled sole.—26th: Diet to be improved; to have some partridge. After this date no further notes were necessary, and the patient continued well.

The following are notes of a very severe case (No. 3) treated in 1881, before I was able to form any opinion as to the value of the advocated treatment:—

R. D——, aged fifty-nine, a wealthy farmer, fell ill on Aug. 6th, 1881, after a few days' absence from home at an agricultural show. He was feeling out of sorts, with slight rigors, headache, quick pulse, and foul tongue. He was ordered to go to bed, and take a saline diaphoretic mixture.—Aug. 7th and 8th: Rather worse. Headache continues. Urine scanty and high coloured. No appetite. To continue the mixture.—9th: Branny diarrhœa came on. Gurgling in right abdomen. Typhoid tongue. Temperature at 2 P.M. 103°; pulse 120. Diet to consist of milk and a little water arrowroot.—10th: Urine loaded with albumen. Morning temperature 103°, evening 105°; pulse 120, feeble. Patient very anxious.—11th: Morning temperature 103°, evening 105·4°; pulse 130. Diarrhœa, thirst, headache, and sordes on lips and teeth. To have one ounce of champagne every hour.—12th: Same as yesterday. Takes little except the wine.—13th: Much delirium. Morning temperature 103·2°, evening 105·6°; pulse 130. Profuse diarrhœa.—14th: As yesterday. Is very ill. Pulse failing. To have half an ounce of pale brandy every two hours. In consultation to-day, the physician called in held out no hope of the patient's recovery. To take half an ounce of digitalis infusion (B.P.) every twelve hours.—15th: Morning temperature 103·4°, evening 105·6°; pulse 130°. Several typhoid spots noticed to-day. Diar-

rhœa continues. To take brandy and champagne. To have the following mixture: pure carbolic acid, fifteen minims; tincture of iodine, fifteen minims; tincture of orange peel, two drachms; simple syrup, three drachms; water to eight ounces; an ounce to be taken every four hours, and also to take the digitalis twice in the twenty-four hours.—16th: Morning temperature 103°, evening 105°; pulse 126, more regular. Diarrhœa not quite so bad. To continue the stimulants, mixture, and digitalis.—17th: Morning temperature 103°, evening 104·5°; pulse 120. Albumen has almost disappeared.—18th: Morning temperature 102°, evening 104°; pulse 120. Diarrhœa much better.—19th: Morning temperature 101·5°, evening 103°; pulse 120. Urine free from albumen.—20th, 21st, and 22nd: About the same. Takes the wine and brandy well, also about a pint of new milk per day.—23rd: Morning temperature 100°, evening 102°; pulse 110. Diarrhœa quite stayed. Tongue moister. Quite sensible during the day; wanders slightly in the night.—24th, 25th, and 26th: Same as last note.—27th: Morning temperature 99·5°, evening 100·8°; pulse 100. Only one stool a day.—28th and 29th: Continues to improve.—30th: Morning temperature normal, evening 99·4°; pulse 100. Takes three pints of new milk per day, and the stimulants and medicines.—31st: Improves daily. Is very weak and emaciated. To have a few ripe grapes without the pips or skins.—Sept. 3rd: Temperature normal; pulse 100. Digitalis to be discontinued. To still have carbolic acid mixture, with the addition of half an ounce of compound tincture of cinchona. From this date his recovery was rapid. No solid food was allowed until the 10th. He was able to get up on the 17th.

The following are brief notes condensed from my case-book of the only death in the series (Case 25) treated with the carbolic acid combination:—

J. N——, aged twenty-eight, a badly-fed farm labourer, fell ill in September, 1882, and was carried safely through a smart attack of enteric fever by a strict adherence to the line of treatment indicated in this paper. Calling to see him one morning about four weeks from the commencement of his illness, the thermometer showed a temperature of 104°. This astonished me, as at my last visit a day or two previously it had fallen to the normal figure. On making examination I found under each arm a large axillary abscess. A few days afterwards I incised them both and they rapidly got well, though of course the patient was thrown back and weakened by this fresh drain on his vital resources. A fortnight after his recovery—that is, eight weeks from the typhoid invasion—his wife took the opportunity of a bright, breezy day at the end of October to scrub and clean the room they inhabited together. She conducted this operation with most praiseworthy assiduity, keeping both door and window wide open, her husband sitting on a chair in a direct line between them, surrounded by a sea of soapsuds. She did not neglect to scrub the floor under the bed, and seemed surprised at the reproof I administered when, on calling, I became an eye witness to the above facts. Next day the poor fellow had a succession of rigors, and succumbed three days after to an attack of acute double pneumonia.

Cases 44, 45, 46, 47, 48, 49, and 50 form an interesting group; all the patients (adults) had the fever in one year (1883), and all lived in one house, a perfect fever-trap, standing with its foundations in sewage. Each was treated exactly the same, and all recovered. The addition of a table of the cases and a selection from the clinical charts would render this article too extensive; and, besides this, they prove from their unanimity rather monotonous. In conclusion, I may add that I am constantly receiving reports from medical friends expressing extreme satisfaction with every fresh experience in the use of Dr. Rothe's antipyretic mixture.

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—Dr. Sergeant (Bolton), the president, occupied the chair at the monthly meeting of this Association, held last week at King-street, Manchester. His election as president took place at the last meeting, and he now delivered his inaugural address, his subject being "The Effect of Improved Sanitation on the Health of the Country, with special reference to Zymotic Diseases." In concluding a very interesting address, he urged that, in attacking zymotic diseases, the weapons which stood first in the list were notification, isolation, and hospital accommodation. A discussion upon the subject ensued.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ON EXTRACTION OF IMMATURE CATARACT.

BY ADOLF BRONNER, M.D.,
SURGEON TO THE BRADFORD EYE AND EAR HOSPITAL.

THE interesting articles of Mr. Higgens and Mr. Tweedy on Extraction of Immature Cataract (THE LANCET, May 12th and 19th) seem to me to have opened up a very important question—i.e., When is a cataract mature for extraction? The general idea is that a cataract is mature when the whole of the lens matter is opaque, and when the iris, by focal illumination, throws its shadow on the opaque lens. This no doubt is a mature cataract from a pathological point of view, but by no means from a clinical or surgical one. Experience has shown that in certain kinds of cataract, in which part only of the lens is opaque, nevertheless on extraction the whole of the lens matter readily leaves the capsule *en masse*. I have recently successfully extracted cataracts in several well-selected cases in which vision was $\frac{6}{9}$ or more, and in which the fundus could be distinctly seen. The cases of this kind most frequently seen are cases of typical nuclear cataract, in which the nucleus becomes opaque long before the cortex of the lens is affected, and in which, both by focal illumination and by ophthalmoscopic examination, the opaque nucleus is seen to be distinctly defined from the clear cortex. Of course in time the cortex also becomes opaque. I have operated in cases in which the posterior part of the cortex gradually becomes opaque, whilst the other part of the lens remains clear; also in cases of cortical cataract, mostly in young people of twenty to forty, in which are found peculiar punctate and striated opacities in the otherwise clear cortex. In these latter cases discission is generally performed, and mostly with bad results. In cases in which the cataract is not mature, from a surgical point of view, and in which it is of great importance to the patient to have the cataract removed, the best and safest method seems to me to be to perform a preliminary iridectomy, followed by Foerster's method of maturing cataracts. In this manner one can in most cases make the cataract mature for extraction in a few weeks, and there is no risk of part of the lens matter remaining in the eye and causing iritis &c., or loss of vitreous, as there undoubtedly is if any other course of operation is pursued.

IS ECZEMA CONTAGIOUS?

BY EDWARD A. OPIE, M.B. DURH., M.R.C.S.

THE above question would be usually answered in the negative, although a variety of eczema capitis has been described as impetigo contagiosa, and among other authorities Dr. Tilbury Fox believed that it could be communicated from child to child by actual contact. The following notes of several cases of eczema occurring in the same family within brief periods of each other may be of interest, as at any rate apparently showing that acute eczema is contagious.

On April 4th I was asked by the wife of a working man to see her children, who had a "breaking out." There were six children, ranging in age from thirteen years to an infant at the breast. All of them had been quite free from any eruption till two or three weeks previously to the above date, when one of them, a boy seven years old, had an eruption on the chin. This, when I examined it, presented the appearance of a patch of eczema nearly well. There were two or three dry scabs. Four of the other children had eczema of the ordinary kind met with in children in different stages. There were to be seen the red patches studded with vesicles with more or less copious exudation, and other patches covered with scabs. The faces of all were affected, and two or three of the children had also eczema capitis. There was perceptible constitutional disturbance, and that very slight, in only two of the children. Within a few days the infant, the only child unaffected at the date of my first visit, had two or three patches of eczema on the face, and soon after the father came to me with two small patches

of eczema on the chin. Four or five days later the mother had some patches of eczema on the breasts and arms. The eczema on the man's chin did not spread, and went away in about ten days. On the woman's breast it remained longer, but by the beginning of May the whole family were practically free from the disease. The treatment adopted was, internally, saline and calomel purges, and arsenic combined in some cases with salines and in others with iron. Externally, zinc ointment with vaseline.

It seems impossible to account for this outbreak of eczema in a whole family of eight persons in any other way than by supposing it was spread from one child to the other, and from the children to the parents by actual contact.

A FOREIGN BODY EXISTING IN THE EAR DURING A PERIOD OF FIVE YEARS.

BY E. ST. GEORGE QUERELY,
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THE following case came under my notice recently, and may be deemed interesting.

J. D——, aged thirteen, consulted me about his left ear. He had suffered for about a fortnight before I saw him with pain in the ear, and latterly with headache and want of sleep. He could not hear the tick of a watch unless placed against his ear. There was some narrowing of the canal. His father informed me that five years before, whilst asleep in the garden, a younger brother pushed a berry into his ear, and his mother syringed the ear and tried to get at the berry with a hairpin and other things, but without success. The boy complained of soreness for a time, but this got better in a few days. Several times afterwards the boy complained, but it was not until the symptoms were becoming worse, and the hearing seemed lost, that he came for advice. On the first day I saw the patient he would scarcely allow me to touch his ear, "it pained him so much." I therefore gently syringed it out with warm water, and placed in it a little wadding saturated with glycerine and laudanum, and desired him to call next day, which he did; but then I could not get a speculum any distance into the canal on account of the great pain. I syringed his ear again, and kept this up for four days. On the fifth morning I syringed a large piece of cerumen out, and was able immediately afterwards to get an auroscope into the meatus. I then saw a scarlet body filling up the whole of the space, and the boy told me he felt the instrument touching it. I removed the auroscope, and tried to get a snare round the body, but to no purpose, and the small forceps only glided off the surface, which seemed hard and polished. At last I gently introduced a sharp-pointed probe until I felt the hard substance; then worked the probe with a circular movement, using pressure inwards at the same time, and after a few seconds I felt something give way. I then withdrew the probe and syringed out the cavity with a little force, and after a short time drove out the foreign body in two pieces, which reminded me of a coffee-berry, only the outside was scarlet in colour and extremely hard. For a few days there was a little uneasiness in the ear, but now it is all right and hearing good.

A NEW ANTISEPTIC SURGICAL DRESSING.[1]

BY H. BENDELACK HEWETSON, M.R.C.S.,
HON. OPHTHALMIC AND AURAL SURGEON, GENERAL INFIRMARY, LEEDS; LATE HON. SURGEON, LEEDS PUBLIC DISPENSARY.

CHINA GRASS is a soft, silky, very highly absorbent fibre, used in various manufactures. The combings form an elastic silken wool, which, when treated with 4 per cent. of salicylic acid, provides an excellent antiseptic absorbent surgical dressing. It is also relatively much cheaper than, so far as I know, any of the usual dressings used in surgery. I have now given it an extended trial, and, supported by the opinions of most of my medical friends, have ventured to bring it before the notice of the meeting of the Leeds and West Riding Medico-Chirurgical Society. I am indebted to Messrs. Reynolds and Branson, of Leeds, for the admirable way in which the raw material is treated and prepared as an antiseptic dressing, of whom it may now be purchased. Its chief value is the way in which it absorbs discharges from a wound, rendering it very dry, and preventing the poulticing of the wound, as it were, when bathed in discharges under less absorbent materials. A considerable quantity is required in cases where the discharges are free, and it is perhaps well to interpose some open-meshed gauze between the dressing and the wound, so as to prevent the China grass from sticking to the wound when removed. I have also observed that under the pressure of bandaging the material still retains its absorbent qualities, and does not cake when properly teased out before use.

[1] Abstract of remarks on China Grass made before a meeting of the Leeds and West Riding Medico-Chirurgical Society, December 2nd, 1887.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

TWO CASES OF REMOVAL OF THE WHOLE TONGUE FOR EPITHELIOMA, AND, IN ONE, OF THE SUBMENTAL TISSUES AND PART OF THE LOWER JAW ALSO; RECOVERY.

(Under the care of Mr. CHRISTOPHER HEATH.)

IN both these cases the disease was extensive, and the operations required for its removal, especially in the first case, were very severe. In the one which is first recorded the operation was successful in the relief of pain and prolongation of life, but, as was expected, secondary growth appeared, and was the ultimate cause of death. The use of the knife and scissors was attended by the best result; the vessels were secured at the time, and the danger of secondary hæmorrhage was diminished by the absence of after-sloughing. Iodoform was used successfully as a local antiseptic, and the strength of the patients sustained by a plentiful supply of nourishment and stimulants. For the notes we are indebted to Mr. Bilton Pollard, surgical registrar.

CASE 1. *Epithelioma of tongue, lower jaw, and lymphatic glands; removal of the whole tongue, with the submental tissues and part of the body of the lower jaw; recovery.*—E. A——, a man aged forty, was admitted on Oct. 31st, 1887. He stated that about six months previously he first noticed something wrong with his tongue, and soon afterwards the glands beneath his jaw began to enlarge, first on the left side and then on the right. About two months afterwards severe bleeding occurred from the under surface of the tongue, and a little later he noticed a sore at this spot. Since then ulceration of his tongue had steadily progressed. He had been a great smoker, and a rather free drinker. On admission the tongue was much fixed, and the anterior third of its right half had been destroyed by ulceration; the remainder of the right half and the anterior third of the left half were infiltrated with new growth. There was a dense mass of indurated tissue beneath the chin, between the latter and the hyoid bone, which was limited on each side by a line drawn from the centre of the hyoid bone to the body of the jaw, about an inch from the middle line. Below the lower jaw there was an enlarged gland on each side, and on the left side there was a string of glands over the course of the carotid vessels, extending from the lobule of the ear to the level of the hyoid bone. The patient could only swallow liquid food. His urine contained a trace of albumen. On Nov. 2nd Mr. Heath operated. He first opened the trachea and inserted a tracheotomy tube, and then plugged the lower part of the pharynx with a sponge. He next divided the lip in the middle line, and prolonged the incision down to the hyoid bone. After dissecting the flap of skin from the jaw on each side, Mr. Heath found that the body of the jaw was involved by the growth, so he sawed the bone through the sockets of the first molar teeth. He then divided the mucous membrane at its reflexion from the tongue to the remaining portion of the lower jaw on each side, freed the diseased tissues as far back as the carotid vessels, and separated a string of enlarged lymphatic glands from the deep vessels on

the left side; the facial and lingual vessels on both sides were divided and tied. Mr. Heath now pulled the tongue, with the piece of the jaw and the submental tissues, forwards, and removed them by dividing their attachments to the hyoid bone, without injuring the epiglottis. The bleeding was arrested, the cautery being applied to some of the bleeding points. The wound was dusted over with iodoform, the indiarubber tube was passed into the œsophagus, and the upper end was brought out at the angle of the mouth. The wound was adjusted with silk sutures, and a dressing of iodoform wool was applied. Chloroform was administered through the tracheotomy tube. The plug in the pharynx prevented any blood passing into the air passages. Four ounces of brandy were given before the operation and two ounces and a half directly after it, and afterwards two drachms were given hourly. The patient was fed by means of the œsophageal tube. On the eighth day after the operation he was taking about five pints of beef-tea, four eggs, and six ounces of brandy in the twenty-four hours. With the exception of an attack of pneumonia, he made a good recovery. On the seventh day bronchitic râles were heard at the left base; on the ninth dulness with tubular breath sounds were detected on the left side as high as the angle of the scapula; on the twelfth the tubular breath sound had disappeared and moist râles were heard. From this date the patient improved steadily, and on the fifteenth day he was fed for the first time without employing the œsophageal tube. He left his bed three weeks after the operation, and went home a week later. At that time the glands along the border of the left sterno-mastoid were enlarging. He was in good health, and able to go about and enjoy himself after he left the hospital, but about three months and a half afterwards he was found dead in bed, probably from suffocation dependent on a large growth which had formed in his neck.

CASE 2. *Epithelioma of tongue; removal of entire tongue by scissors from the mouth; recovery.*—J. H——, a man aged sixty-one, was admitted on March 27th, 1888. He first noticed a lump in his tongue fifteen months ago. On admission, the whole of the tongue was indurated as far back as could be felt with the finger; its surface was very irregular and glazed, and there was a sloughy ulcer on the left border. No enlarged glands could be felt. On March 28th, an enema of brandy having been given, and the patient being placed under the influence of chloroform, which was then administered through a nasal tube, Mr. Heath removed the entire tongue by means of scissors in the way recommended by Mr. Whitehead. The lingual artery was seen and secured before division; the other was divided, clamped, and tied. After the bleeding had been stopped and a comparatively dry surface secured, the floor of the mouth was painted with Whitehead's varnish. An œsophageal tube was introduced through the mouth, and the upper end of it secured by a bandage passing round the forehead. After the operation the patient was given a drachm of brandy, with two ounces of beef-tea and milk alternately, every half-hour. On the following day eggs and oxtail soup were added to his diet. On the second day after the operation the brandy was given in double doses every two hours, and on the fifth day it was given every four hours. All food was given through the œsophageal tube, but on the ninth day after the operation the patient found the tube troublesome, so it was removed. It was necessary to replace the tube on the following day, as the patient was not able to swallow. The tube was finally removed on the fifteenth day, and from that date the patient succeeded in feeding himself. His general condition was good and the floor of his mouth was healing well. It was frequently washed with Condy's fluid, and was dusted over with iodoform powder daily. The highest temperature was 108·4° on the fifth day; after that date it was normal. The patient was discharged on the seventeenth day after the operation.

CAMBRIDGE HOSPITAL, ALDERSHOT.

A CASE OF PHTHISIS COMPLICATED BY EMPYEMA; RECOVERY; REMARKS.

(Under the care of Surg.-Major W. H. HORROCKS.)

THE following case of phthisis treated in this hospital presents many points of interest, and illustrates the possible arrest of phthisical processes by means of fluid pressure.

Private McH——, age thirty-one (twelve years' service), was admitted on May 11th, 1887, suffering from hæmoptysis. The patient stated that he had suffered from winter cough for several years, and during the previous three months the sputum had been constantly tinged with blood. He had never suffered from syphilis, and there was no family history of consumption.

Condition on admission.—A finely built but much emaciated man; height 72 in.; chest girth 40 in.; weight 9 st. He suffered from constant hacking cough and night sweats. The expectoration, a mixture of bright red blood and a little mucus, amounted to between ten and twelve ounces in the twenty-four hours. Right lung apex: resisting dulness on percussion; increased vocal fremitus and loose subcrepitant and gurgling râles heard on auscultation down to the third rib; base normal. Left lung normal.

The treatment consisted of ice internally and locally, ergot, gallic acid, acetate of lead, &c., and for a time the hæmoptysis ceased. During May, June, and July the disease in the right apex steadily progressed and was attended by repeated attacks of hæmoptysis; on several occasions the patient became collapsed from loss of blood. On Sept. 1st McH—— was seized late in the evening with a severe attack of dyspnœa and great pain close to the right nipple. On examination next morning, "flat dulness," feeble vocal fremitus, and distant bronchial breath sounds were detected over the right base and axilla. On Sept. 3rd the apex of the heart was found displaced and beating half an inch outside the left nipple line, and on the needle of a hypodermic syringe being passed into the pleural cavity a syringeful of pus was withdrawn.

On considering all the details of the case, and how the patient was rapidly being exhausted by the constantly recurring hæmorrhage from the cavity in the right apex, it was determined to allow the fluid to accumulate in the right pleural cavity, in the hope that by its pressure the diseased lung might be so compressed as to practically close the cavity in the upper lobe of the right lung, at the same time carefully watching for any signs of congestion in the sound lung or interference with the heart's action. Accordingly day by day, with the increase of fluid in the right pleura, it was noticed that the sanguineous expectoration gradually diminished in quantity, and in a little more than fourteen days amounted to only three ounces of muco-pus, without a trace of blood. On Sept. 26th, the left (the sound) lung beginning to show signs of congestion, and the dulness on the right side having mounted to the third rib, aspiration was performed in the right axilla, and twenty-six ounces of pus removed. On Oct. 13th aspiration was again performed, and on the 19th a drainage tube was inserted between the seventh and eighth ribs in the mid-axillary line. After this operation there was no return of hæmoptysis, and the secretion of pus from the pleural cavity gradually diminished. On Dec. 12th no râles could be heard over the right apex, the physical signs being harsh breath sounds and resisting dulness on percussion. On Feb. 9th, 1888, the secretion of pus having ceased, the drainage tube was removed, the wound rapidly healed, and no reaccumulation of pus took place. A month later the patient was discharged, having regained his former weight of twelve stone; the physical signs present in the right lung indicated a healed cavity surrounded by induration of lung tissue in the upper lobe and pleural adhesions over the middle and lower lobes.

Remarks.—The influence of serous effusions in temporarily arresting tubercular lung disease is often seen in practice, and had the fluid in this case been simply serous there could have been no doubt as to the propriety of adopting the line of treatment detailed above. But a purulent effusion has infective as well as pressure effects; consequently, it was only after considering how rapidly the patient was being exhausted by the hæmoptysis, the imminence of a fatal result, and the futility of all drugs, that it was considered right, as a last resource, to risk the remote possibility of infection in order to obtain the immediate benefits of fluid pressure. After producing decided intra-pleural pressure, it seemed advisable to aspirate two or three times and slowly diminish the pressure before introducing the drainage tube, so as to obviate the disastrous results of rupture of lung tissue and cardiac syncope, which have been reported as occurring when a large quantity of fluid has been suddenly removed from the pleural cavity. Lastly, with regard to the origin of the empyema in this case, it appeared most probably due to the giving way into the pleural cavity of a small patch of caseous softening

situated just under the visceral pleura, the patch of softening being isolated, and having no communication either with a bronchus or the cavities previously formed, for there was no evidence of the formation of a pyo-pneumothorax.

LINCOLN COUNTY HOSPITAL.

A CASE OF TARSO-CHEILOPLASTIC OPERATION FOR TRICHIASIS.

(Under the care of Mr. W. J. CANT.)

THE following case was reported by Mr. W. H. B. Brook, house surgeon.

R. E——, a delicate girl, aged eighteen, was admitted into the hospital suffering from trichiasis of the left lower eyelid, the lower segment of the cornea being nebulous from the constant irritation caused by the lashes rubbing on its surface. There was free muco-purulent discharge with blepharospasm, the vision being reduced to perception of light. For a few days an antiseptic and slightly astringent lotion was ordered to be used, which diminished the discharge.

On JAN. 23rd the patient was put under the influence of the A.C.E. mixture, and an incision 15 mm. in length and 4 mm. in depth made along the margin of the lower lid, just posterior and parallel to the lashes. On turning the lid down with the fingers, a gap was left between the edges of the incision about 3 mm. wide. Four silk sutures were then passed, one end of each through a fold of skin as near the lashes as possible, the other through a similar fold about 8 mm. down the cheek; on these being tied, the lower lid was drawn and the incision opened. All bleeding from the lid having ceased, a piece of mucous membrane was removed from the lower lip of the same shape as, but slightly larger than, the wound, into which it was accurately fitted with gentle pressure. No sutures were used to fix the graft, but the whole was dusted with fine iodoform powder, a pad of wool moistened with hot perchloride of mercury solution (1 in 2000) and a bandage being used to maintain the graft in position.

The dressings were removed two days after the operation, when adhesion of the graft was found to have taken place; on the fourth day the silk sutures were removed. At the present time (Feb. 20th) the lashes are found to be in a normal position, without any tendency to incurve; the opacity of the cornea has greatly diminished, and the vision is improving. The operation seems to afford a permanent cure for these most troublesome cases.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

Electrolysis in Gynæcological Practice.

A MEETING of this Society was held on June 6th, Dr. John Williams, President, in the chair.

Dr. W. E. STEAVENSON read a paper on the use of Electrolysis in Gynæcological Practice. The author drew attention to the numerous cauterising agents used in gynæcological practice with the object of raising a discussion on their relative merits and values. Reference was also made to the use of the actual cautery, Paquelin's cautery, and the galvano-cautery, but the paper was chiefly devoted to advocating a more extensive use of electrolysis. It was pointed out that this property of electricity is especially useful in the treatment of affections in parts difficult of access, and perhaps finds its widest field for usefulness in the treatment of those diseases of women in which local applications are necessary. It is a more efficient and elegant way of applying caustic than any other that we possess; it can be most accurately localised at the part it is wished to affect; the amount used and the extent of tissue to be destroyed can be regulated to a nicety, and its action can be commenced and arrested at any moment at the will of the operator. A brief account was given of the action and theory of electrolysis and of the batteries and instruments to be employed. Its action and the method of employing it in the following affections were then given—viz., stricture of the female urethra; stenosis of the os uteri or cervical canal; dysmenorrhœa and sterility, in the place of the tents, dilators, or incisions that are often employed; abrasions of the cervix uteri; extra-uterine fœtation; fibroid tumours of the uterus; and cancer. The author then invited discussion on the relative merits of other caustics and modes of treatment employed in the affections mentioned as compared with their treatment by electrolysis.

Dr. LOVELL DRAGE read a paper on cases of Chronic Cervical Catarrh treated by Electrolysis. These cases formed an addendum to Dr. Steavenson's paper. In all, the healing of abraded area was promoted. In one instance, where the chronic condition of the cervix was complicated by a Hunterian chancre on that part of the uterus, the beneficial effect of the treatment was well marked. No untoward effects were produced by the electrolysis, menstruation was not interfered with, nor was pain caused either at the time when the current was passing or subsequently. All the cases were of long standing, and other treatment had failed to give relief. Dr. Drage therefore contended that a claim could fairly be made for the recognition of electrolysis as a useful treatment in such cases.

Dr. R. A. GIBBONS communicated a paper on Electrolysis in some Chronic Uterine Affections, and gave some illustrative cases. The cases had been under his care at the hospital, and were those of chronic metritis, endocervicitis, lupus minimus, caruncle of the urethra, and cancer of the uterus. The latter were accompanied by profuse hæmorrhage, and were mentioned in order to call attention to the efficacy of the positive pole in arresting bleeding. After explaining the action of each pole on the tissues, the author dwelt upon the advantages derived from the use of the negative pole as a caustic in chronic inflammatory conditions of the body and neck of the uterus. The glairy discharge, so common in this class of affections, became electrolysed, and thus the lining membrane could be acted upon directly and thoroughly. The accuracy with which the application of electrolysis could be made was greater than that of any caustic. During manipulation the operator had no difficulty in keeping the electrolytic power under his perfect control. After giving technical details, Dr. Gibbons dwelt on the necessity of a reliable galvanometer. This method of employing electrolysis had never been described in any English work.

Dr. J. SHAW read a paper on the Constant Current in the Therapeutics of Gynæcology. The author described the appearances presented by a myofibroma when subjected, about twelve hours after its removal, to the prolonged action of a constant current, and treated of the chemical and microscopical results observed in a subsequent experiment, also of certain attendant electrical phenomena. The different action on granulations of the positive and negative poles respectively was described, and the effects of the constant current in intra-uterine applications and punctures, on the circulation, temperature, sensibility to pain, and urinary excretion, were in turn detailed. From these observations, the author concluded that the constant current acts on a fibroid in a threefold manner—(1) to but a small degree by electrolytic action, the positive pole most affecting the cellular and the negative the formed elements; (2) by the hæmostatic action of the positive pole and the derivative influence of the negative; (3) by increased arterial tension, and so diminished nutrition, accompanied by some alteration of the mutual relation of the fluid and solid elements.

In the discussion which followed the reading of the above papers, Dr. HORROCKS noted the important admission of Dr. Steavenson that electricity possessed no specific virtues, but acted as a stimulant, caustic, or cautery. A powerful battery was expensive, ponderous, and hard to work and keep in order; hence, in general practice, it would hardly be preferred to acids, alkalies, the knife, or the thermo-cautery. In hospital practice he had found the battery to be of certain value, but he agreed to Dr. Steavenson's admission. Even in the treatment of paralysis careful friction of the affected muscles proved as beneficial as electricity. Statements about the number of cells which were used in a given case were unreliable, for newly charged cells were stronger than the same cells charged for some time or not in perfect working order. A means of measurement was absolutely necessary; for this purpose a galvanometer answered best, but that appliance introduced another complication and expense.—Dr. AUST LAWRENCE said that allowance must be made for rest in bed, purgation, and the other altered conditions to which a patient under treatment by electrolysis was subjected. A highly trained electrician was not indispensable, as with a little help and study anybody could master the details sufficiently to be able to employ electro-

lysis; but, on the other hand, a fair knowledge of gynæcology was absolutely necessary.—Dr. HERMAN insisted on clinical observation; the utility of electricity could not be ascertained by *a priori* argument. He therefore considered that the most instructive parts of the communications read that evening were the cases reported by Drs. Lovell Drage and Gibbons. Dr. Matthews Duncan taught that if a cervical erosion could not be cured within two months, treatment had better be discontinued. Yet Dr. Drage's cases had been under treatment for three or four months. In the case of Dr. Gibbons' patients, the improvement might have been simply due to the complete rest and appropriate diet which patients enjoyed in a hospital. Women subject to the minor diseases of their sex could not rest at home if poor; in hospitals they could rest and be cared for. To this fact was largely due the great benefit which followed treatment in hospital. The course of Dr. Gibbons' cases after leaving hospital had not been stated; in some, at least, all the symptoms might have returned within a few weeks. In one case a urethral caruncle had been destroyed by two applications of electricity. By the older methods one was usually sufficient. Dr. Herman admired the candour with which the results of the cases had been reported; but he did not think that the prognosis of such cases would be much modified by the introduction of this method of treatment by electricity.—Dr. WILLIAM DUNCAN said that much more carefully recorded clinical evidence was needed. He had employed electrolysis in several cases of myoma with marked benefit in those where the chief symptom was metrorrhagia, and in one instance at least the tumour was markedly diminished in size, which proved that the electricity was something more than a mere cauterising agent.

The discussion was adjourned until Thursday, June 21st, at 8 P.M.

Specimens.—Dr. HERMAN: Uterus inverted by a Gangrenous Fibroid. Dr. W. DUNCAN: Male Infant secreting Milk from Right Breast. Dr. AUST LAWRENCE: Vesical Calculi removed from a Woman, who for eighteen years suffered from complete Prolapse of the Uterus. Dr. BRAXTON HICKS: Form of Hodge's Pessary made on Watch-spring Pessary principle. A report was read on Dr. Horrock's specimen of Inverted Uterus exhibited at the May meeting.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

AN ordinary meeting of this Society was held on May 4th, Mr. E. Atkinson, M.R.C.S., in the chair.

Treatment of Uterine Myomata by Dr. Apostoli's Method.—Mr. MAYO ROBSON read a paper on his experience of the treatment of fibroid tumours of the uterus by electrolysis, and gave details of several cases. In one case a large tumour reaching to the ribs had been reduced to a simple pelvic enlargement in a little over two months, during which time a current varying from 150 to 270 milliampères had been applied twelve times; the menorrhagia, which on commencing the treatment required eighteen napkins a fortnight, was reduced to six napkins a month when the patient left. In another case, although the treatment had been just as efficiently tried, nineteen operations in three months, varying between 180 and 300 milliampères for periods of ten minutes each application, the tumour had steadily increased. In several other cases improvement had been effected and hæmorrhage controlled. In no case had any inconvenience resulted from the operation. In all cases Dr. Apostoli's directions had been strictly carried out. Mr. Robson thought that in electrolysis we have a powerful and efficient means of treating with success some cases of fibroid tumours of the uterus, but that too much must not be expected, for in some cases it seems to fail to give the slightest benefit. He thought that all cases in which the treatment has been tried ought to be reported in detail, so that the profession may be able to decide for itself on this important question, and so that an opinion may be formed as to what cases are likely to be benefited by it. His own experience led him to believe that benefit was most likely to ensue in cases accompanied by severe hæmorrhage. Mr. Robson had found benefit to accrue from the treatment in cases of endometritis and in subinvolution accompanied by menorrhagia, and related a case in illustration, where the hæmorrhage at a menstrual period had been reduced from fifty napkins to fourteen. He used a battery of fifty one-pint Léclanché cells, and employed a double collector, a water rheostat, and a Gaiffe's galvanometer.—Dr. CAMERON pointed out that electric measurements were to a certain extent fallacious, as, according to the shape of the tumour, a definite current might act very differently, according as it was directed through a small portion or widely diffused.—Mr. L. KNAGGS reviewed the published results of the operation. The great difference of opinion on the subject must be due to errors of diagnosis or inexperience in the methods of administration.

The Nature of Cancer.—Dr. Braithwaite read a paper on this subject. He reviewed the various characteristics of the epithelium cell with regard to position, shape, size, and nutrition, and considered that the abnormal growth was due to the cell having pierced the basement membrane, and therefore being subjected to conditions allowing of greater nutrition and consequent growth. Growths while they remained encapsuled were not malignant.

Dr. CHURTON showed two cases of Duchenne's Paralysis, members of the same family.

Pathological Specimens.—Mr. BENDELACK HEWETSON: A large Rhinolith of twenty years' growth removed by crushing; weight, 96 grains.—Mr. LAWFORD KNAGGS: Ovaries, Fallopian Tubes, and Uterus at the Close of Menstruation.—Mr. TURNER: Microscope sections of (1) Duct Papilloma of Breast, (2) Intestinal Polypi, and (3) Infiltrating Alveolar Sarcoma of Chest Wall.

Notices of Books.

Surgical Applied Anatomy. By FREDERICK TREVES, F.R.C.S., Surgeon to, and Lecturer on Anatomy at, the London Hospital; Examiner in Anatomy at the Universities of Aberdeen and Durham; late Hunterian Professor of Anatomy and Wilson Professor of Pathology at the Royal College of Surgeons of England. Illustrated with Sixty-one Engravings. Third Edition. London: Cassell and Co. 1888.—In preparing this, the third, edition of his popular book, Mr. Treves has carefully revised the whole, and has entirely rewritten some of the sections. The original plan of the work has been preserved, and its general features are unaltered. Mr. Treves is well fitted for the task of writing on the subject, and students cannot have a better guide to the anatomical side of surgery than this book. It is too well known to need recommendation, but we are glad to see that a third edition has been called for, and that Mr. Treves has found it possible to improve upon its predecessor.

Posological and Therapeutic Tables, containing the doses, actions, and uses of the Medicines in the British Pharmacopœia: with Poisons. Third Edition, revised and enlarged. Edinburgh: Maclachlan and Stewart. London: Simpkin, Marshall, and Co. 1888.—This little work is one of a class which is deservedly popular with practitioners. The arrangement of remedies with their doses, actions, and uses in alphabetical order is particularly neat and convenient for ready reference. The statements respecting them are carefully accurate, concise, and, for a pocket companion of small size, unusually full. In a time like the present, when the discovery of new drugs is a matter of almost daily occurrence, it is not remarkable that some of the most recent—for example, the hyoscine preparations—should be omitted from the tables; but these are, on the whole, notwithstanding, well up to date in this respect, and have been largely supplemented from the resources of the "Extra Pharmacopœia." In a few instances the statement of quantities is defective. Thus we find no mention of the composition of boroglyceride or of *guttæ eserinæ sulphatis*. We observe also that calomel is advised in the treatment of cholera, though this is contrary to the views of most Anglo-Indian authorities. A page or two is usefully devoted to the symptoms and treatment of cases of poisoning, and we can, in spite of a few such imperfections as we have noticed, recommend this instructive little book

as a most appropriate *vade mecum* for practitioners of every class.

Irregularities of the Teeth and their Treatment. By E. S. TALBOT, M.D., D.D.S. London: H. K. Lewis.—The first part of Dr. Talbot's treatise is devoted to the anatomical description of the jaws, with especial reference to those parts which are most intimately connected with dental irregularities. Under the heading Etiology he gives numerous and typical instances of the ill consequences that may result from the too prolonged retention, or, on the other hand, of the premature extraction, of the temporary teeth. In the latter case, he remarks that the alveolus absorbs, just as it does after the removal of a tooth in the adult, and the contiguous teeth come into closer contact; thus there is a contraction of the dental arch, and the succeeding permanent teeth are very likely to erupt out of the regular curve. Deformity of the jaw due to thumb-sucking, and the saddle-shaped and V-shaped jaws, are illustrated, and their origin is explained. He appends a table, formed from a large number of statistics collected in America, which gives support to the conclusions of Tomes and other observers in this country that there is a greater proportion of V-shaped jaws amongst idiots than amongst ordinary individuals, although it is by no means maintained that there is a constant association, or that persons with the V-shaped arch are invariably deficient in mental power. A description of the various mechanical means which can be made subservient to the treatment of irregularities (a greater number of which devices have been laid under contribution of recent years, such as the elasticity of piano wire, the screw and the wedge), and their application, form nearly half of the book. The book, without pretending to be an exhaustive account of the subject, is practical, and the illustrations are excellent.

Medianschnitt einer Nochschwangeren bei Steisslage des Fötus. Von Dr. W. WALDEYER. Bonn. 1886.—The cadaver from which the frozen sections here described were made was that of a woman aged thirty-eight, who was killed by a railway engine at full term of pregnancy. The violence caused a fracture of the first sacral vertebra, causing a sort of spondylolisthesis. As regards the uterus, the large venous sinus usually (or always) found opposite the os internum was well marked. The cervical canal happened to be accurately divided in its whole length, which had never before occurred. The whole cervix was much enlarged by increased thickness, but appeared otherwise unaltered, there being no sign of any part of it having been taken up into the uterine cavity, nor was there any sign of a "contraction-ring" (such as has been described by Schroeder) marking off a "lower uterine segment" above the os internum. The cervical glands extended to the os internum, where they stopped. The connexion between the cervix and bladder was loose and easily separable. The uterus was indented by the surrounding organs, even intestines, and the fœtal projections indented the liver. How far this occurs during life is a question. The drawings are well executed, and the volume is a welcome addition to the subject of the Anatomy of Pregnancy.

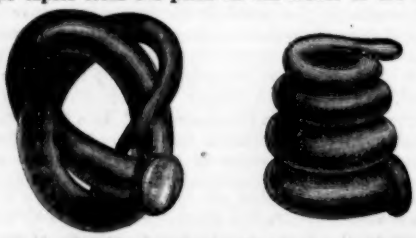
Transactions of the Obstetrical Society of London. Vol. XXIX., for 1887. Part IV., for October, November, and December.—This number of the Obstetrical Transactions fully maintains its high character; indeed, it is full of good work. Among its contents may be mentioned an interesting paper by Mr. Arbuthnot Lane on the Causes of the Differences between the Male and Female Pelves (which would, however, have been improved by a further acquaintance with the literature of the subject); a valuable and learned paper by Dr. Matthews Duncan on Tonic Uterine Contraction without Completeness of Retraction; three important papers on the subject of Extra-uterine Gestation, by Drs. John Williams, Herman, and Champneys; and two carefully observed cases of Eclampsia of Pregnancy and Bright's Disease during Pregnancy, in which the urine was accurately examined by Dr. Herman.

Lectures on Diseases of the Eye.—By CHARLES BELL TAYLOR, F.R.C.S. London: Redway. 1888.—These lectures are six in number, and are devoted severally to cataract, squint, glaucoma, optico-ciliary neurotomy, the use and abuse of mydriatics, and eye troubles in general practice. They do not contain much that is new, but the descriptions of the diseases mentioned are well given, and may very advantageously be read by the general practitioner.

New Inventions.

A NEW RECTAL BOUGIE.

THE accompanying woodcuts, drawn to the scale of half an inch to an inch, show a new kind of rectal bougie possessing the following characteristics. 1. The point of the bougie is a quarter of an inch in diameter. 2. The bougie tapers from the point for six inches to the commencement of the maximum thickness. 3. From the commencement of the maximum thickness to the end of the bougie the maximum diameter is maintained. 4. The bougie is extremely flexible and almost completely incompressible. It can be twisted into a coil or tied into a reef-knot without either compression of its calibre or cracking of its surface. 5. It can be retained for twenty-four hours with very little, if any, discomfort to the patient, and it would be difficult with the pressure usually employed in introducing a bougie to make a false passage. The points of all the different sizes of these bougies are a quarter of an inch in diameter, the maximum thickness of the different sizes increasing by one-sixteenth of an inch; No. 1 being three-eighths of an inch in diameter at its maximum thickness, and No. 12 seventeen-sixteenths of an inch. These bougies are made with cotton webbing covered with a coating of indiarubber, and filled with very small shot. In introducing these bougies, glycerine or soap, not vaseline or grease, should be used as the lubricant. The bougies have been made for me by Messrs. Weiss and Son, of 287, Oxford-street, W.



D. H. GOODSALL, F.R.C.S.,
Assist.-Surg. St Mark's Hosp., Surg. Metropolitan Hosp.
Devonshire-place, W., June, 1888.

THE LANCET.

LONDON: SATURDAY, JUNE 23, 1888.

FROM the time of HIPPOCRATES downwards it has been acknowledged that those who enter the medical profession shall recognise that they are undertaking high responsibilities and delicate duties. The run of mankind are very much at the mercy of the medical profession, and are likely always to be so. They have to take not only their medicine, but their conceptions of disease in general and their knowledge of every individual case of it, from the medical man. The greatest philosopher and the most powerful statesman know little more of medicine and the human body than the unlettered peasant. When they come to be ill they are equally dependent on the intelligence and on the honesty of the medical man they consult. It is immensely important, therefore, that they should have guarantees of character and of conduct. The greater the advances of medicine, and the more complete its methods of diagnosis, the more important is it that the *morale* of its practitioners should be sustained. The practice of medicine presupposes the necessity of the highest honour, the best faith, and the purest motive on the part of its followers; and the daily duties of the medical man give him the opportunity of misleading or injuring his patient if he be not actuated by high principle and the desire to follow the great masters of his art. It is fortunate for the public that the profession has had lofty ideas of conduct, and that the instances where these have not been realised have been so rare as to excite remark. It is no slight testimony to the existence of a high standard of conduct in the profession that whenever any of its members err from the straight path, the one heavy condemnation which occurs to their brethren and the public alike is to say that his conduct is unprofessional. Some would have us believe that in these days of fierce competition, as they are called, the standard of professional morals must be lowered; that men in the profession may advertise themselves and their wares as men do out of the profession, or as quacks do in the market-place of country towns on a Saturday night. We can admit no such doctrine. Rather must we raise higher the standard and the spirit of professional behaviour. If we do not, medicine itself will suffer, and the medical man will become the mere medicine man of an anterior time or barbarous country. He will be regarded with superstition rather than respect, and with mean sentiments rather than with gratitude.

It must be confessed that some of our Medical Colleges lately have shown a tendency to forget their disciplinary functions—to ignore them, or to hand them over to anybody. This is a serious charge to make against the qualifying bodies, but it is not far from a true one. Some of the Royal Colleges have occasionally remembered that they have such functions. But others have been very slow to exercise them. They have acted as if their only duty was to take fees from anxious candidates, in return for a document that imposed no obligations either on them or on the candidate. If any of their members erred, it was not their business to remonstrate or to rebuke them, and they have allowed them to go from bad to worse till they have laid themselves open to charges of "infamous conduct in a professional respect," or have forfeited the esteem of their professional brethren. We are glad to see that the disciplinary or penal powers of the qualifying bodies and of the Medical Council are receiving the consideration of the President of the Medical Council and of the Executive Committee. It is notorious that these powers in the different bodies are certainly very various, and in some cases very ill defined; the bodies are too willing to throw the whole cost of dealing with cases on the Medical Council. This is an evasion of duty. The Medical Act contemplates the exercise of disciplinary powers by these bodies, or by some of them. If any of them are in doubt about the extent or definition of these powers, they should ask for the legislative remedy of such defects. The judgment of the Medical Council should only be sought in cases of doubt or difficulty. The bodies which give qualifications should obviously be empowered to withdraw them from unworthy holders on sufficient cause being shown. If the bodies are to exercise no discipline, they will become little more than guilds, and the profession will degenerate into a trade. The profession will view with interest any suggestions for the amendment of the disciplinary powers of the qualifying bodies, but meantime it expects these bodies to be a little more bold in the use of the powers they possess.

EVER since inoculation of small-pox was interdicted by law we have been deprived of the most simple proof of the value of vaccination. Before this law came into existence it was always possible to show by direct experiment, as did JENNER and his contemporaries, that recently vaccinated persons were insusceptible to inoculation of small-pox virus; and so convincing did this evidence appear that it was never contemplated it would not be accepted as sufficient proof for all time. Although we have in these days a noisy minority who remain unconvinced, the evidence which every epidemic of small-pox produces is sufficient for most minds. It is always found that the unvaccinated suffer and die in much larger proportion than the vaccinated, and that the latter, when attacked by small-pox, die in inverse proportion to the number and quantity of the vaccination cicatrices which they possess. The statistics of every epidemic and of every small-pox hospital have taught the same lesson, but it is necessary that the facts should be continuously recorded, if for no other reason than to supply material upon which judgment as to the value of vaccination can be formed by every generation. In 1884 evidence of a different kind, but leading to the same conclusions, was adduced as the result of an inquiry into the condition as to vaccination of the inhabitants of the parish of St. Pancras. This investigation showed that 08 per cent. of persons over ten years of age and alleged to be re-vaccinated were scarred with small-pox, that 2·8 per cent. of those vaccinated in infancy but not revaccinated were thus marked, while as many as 62·2 of the unvaccinated at this age-period bore scars of the small-pox from which they had suffered. These figures derive support from the statistics of a similar inquiry made in West Ham during the year following that at which the St. Pancras census was

taken. On this occasion it was found that those stated to be revaccinated, vaccinated, and unvaccinated were respectively marked with small-pox to the extent of ·09, 4·4, and 52·2 per cent., figures agreeing sufficiently closely with those obtained in St. Pancras.

A further contribution to our knowledge of this subject was made last week by Dr. ROBERT CORY, who read before the Epidemiological Society an interesting paper giving an account of the conditions as to vaccination of 152 persons scarred with small-pox who had come under his observation in the out-patient rooms of St. Thomas's Hospital and the vaccination stations with which he is connected. Of these persons 53·2 per cent. were admittedly unvaccinated, and, as he pointed out, it must be borne in mind that they were derived from a community of which the vaccinated are to the unvaccinated in the rough proportion of twenty to one. The incidence of this disfigurement upon the unvaccinated is therefore very striking. Dr. CORY, moreover, reminded his hearers that unvaccinated persons, when attacked by small-pox, die in larger numbers than the vaccinated under the same conditions, Dr. GAYTON'S statistics showing that the mortality of the unvaccinated is 43·7 per cent.; nevertheless, the survivors were sufficiently numerous to give the interesting figures derivable from Dr. CORY'S records. Those admittedly unvaccinated, he states, had an average age of 7·02 years at the time of attack by small-pox; those alleged to be vaccinated in infancy, but who bore no mark of the operation, had an average age of 13·46; while those possessing one, two, three, and four or more infantile vaccination cicatrices, had at the time of their illness an average age respectively of 17·2, 18·2, 19·5, and 19·75 years. The argument was further strengthened by the history Dr. CORY gave of fifteen persons who had lost their eyesight from small-pox, and who had been attended by Dr. BRAILEY, to whom he was indebted for the facts. Of these fifteen persons seven, or nearly one-half, were unvaccinated; while four others, though alleged to be vaccinated, bore no trace of the operation. The average age at which the seven admittedly unvaccinated persons were attacked was nine years; the average age of four who were alleged to be vaccinated, but who possessed no vaccination mark, was 8·2 years at the time of attack. The average age of two persons possessing one vaccination scar was twenty years, and of two possessing more than one vaccination scar was thirty years. Dr. CORY shows, therefore, that the duration of freedom from attack by small-pox which pits the face or leads to loss of eyesight is dependent upon the character of the vaccination. The question therefore arises, How many vaccine vesicles should be produced in infancy to give the longest period of immunity from subsequent small-pox of this character? The number of cases on which Dr. CORY'S conclusions are based is necessarily small, but so far as they go they show that the Local Government Board is well advised in recognising that certainly not less than four vesicles should be produced in every child. This is, indeed, a matter which concerns every practitioner, for there is not wanting other evidence to show that the operation as performed at the public vaccination stations is more protective against small-pox than is the case when a smaller number of vesicles are produced. Every operator therefore incurs a serious responsibility who neglects to give his patient the largest amount of protection experience shows to be necessary.

The chief interest attaching to the statistics we have extracted from the various reports and papers bearing on this subject is in the uniformity of the lesson they indicate. Whether the value of vaccination be studied by the death returns of small-pox hospitals, by a census of the population such as those of St. Pancras and West Ham, or by the records of painstaking observers such as Dr. CORY, the result is always the same. But it must never be thought that it is unnecessary this work should be continued. Nothing is now regarded by some people as settled for all time, and each generation should therefore be as carefully supplied with evidence of its own time as if none were trustworthy that belonged to the past.

THE Scottish Universities Bill has recently been advanced a stage by its safe passage through committee in the House of Lords. The alterations effected in its enactments were few, and were chiefly connected with the extension clauses and with the constitution of the University Courts. We referred to them recently as of a satisfactory nature, while merely in the form of propositions; and their adoption has distinctly improved the character of the Bill as a well-balanced measure. Were this all that need be said, the academic world and the general public would have good cause for mutual congratulation in regard to the Bill, and might look forward with confidence to the satisfactory evolution of the new *régime* it is intended to inaugurate. But, most unfortunately, the Scottish department have inexplicably failed in the one most essential part of their work. They have expended much time and forethought in selecting their building materials, and in elaborating the architectural design; they have, however, been singularly unfortunate in the choice of their workmen. The Commission appointed to administer the Act is conspicuously inadequate to perform the task of reconstruction committed to its charge. On all hands its composition is adversely criticised. In the Upper House, Lord ROSEBERY indulges in mild but unmistakable satire at its expense; in the Commons, the Treasury Bench engages night after night in embarrassing efforts to explain the *rationale* of its construction; while public opinion in the north, as interpreted by our contemporary, the *Scotsman*, pronounces it to be "deplorably weak." We would not venture upon so unqualified an expression of opinion, for there are some undoubted elements of strength and capacity in the Commission as at present constituted. Nevertheless, even a hasty glance at its constitution shows it to be most unequally balanced as regards the interests it represents; and a slightly closer analysis of its individual and corporate characteristics entirely justifies Lord NAPIER'S remark that "its composition was a very ample security against its doing anything dangerous or revolutionary." Had his Lordship omitted the last three words, and ended his sentence with "anything," it would appear to many critics that his prediction was no less absolutely true. We have already pointed out that on the constitution of the Commission, and its capacity for administering intelligently the powers entrusted to it, depends the future welfare of Scottish University education.

Were there no hope of amendment in the *personnel* of the Commission, the outlook would be gloomy indeed; but the Lord Advocate explained, in reply to Mr. HUNTER, that the list is not considered by the Government to be definitely closed, and that certain additions may yet be made if it be deemed advisable to do so. Unfortunately the only improvement possible is an addition to the size of the Commission, already a sufficiently numerous body. The subtraction of any names already on the list would be an invidious task that cannot be considered, although it is difficult to conceive why so many lawyers busily engaged in practice, and most of whom have had no practical experience of University administration, should have been selected. Admittedly the functions of the Commission will be mainly constructive, and a legal sub-committee for the framing of enactments is essential; but a small minority of the members would suffice for this purpose. The Lord Advocate's explanation that the Government have sought for "unbiassed and practical men capable of giving impartial consideration to all general and local questions and interests," by no means meets all the requirements of the case. That is of course a primary necessity, and it might be met by the appointment of any half-dozen men of honesty and ordinary intelligence; but there are other points of little less importance that must also be looked to, which call for additional characteristics in the Commissioners besides those just mentioned. It is no less essential that the Commission should contain representatives of special branches of learning, whose individual experience and knowledge will enable them to assess the value of the evidence brought forward by specialist witnesses. We do not presume to refer to the claims of a classical curriculum and of the "humanities" to more adequate representation, but it is fairly within our province to inquire—How is the Commission as now constituted to judge of "general and local" requirements as regards the cultivation of physical and experimental sciences in the Universities? Which of the Commissioners is by his individual experience specially qualified to settle the thorny question of the proposed entrance examination? Is there actually to be no representative of the abstract and mathematical sciences? It is also a question whether the medical profession in Scotland will be satisfied that its interests are even yet sufficiently represented by the two medical members of the Commission. The first, though admirably qualified in many respects, has no direct connexion with institutions of a purely academic character; and the second, whose tardy appearance as a member of the Commission suggests an after-thought on the part of the Government, though a distinguished leader in the profession and a valued councillor in connexion with the English schools, does not himself profess an intimate knowledge of the corresponding institutions in Scotland. We do not wish to criticise the action of the Government in making these appointments; on the contrary, we rejoice that men of such eminence have been persuaded to undertake duties of so onerous and exacting a character. We would, however, point out the desirability of appointing a third medical representative, due regard being had to the enormous development of the interests of the profession in the Scotch schools; and it would be of additional value if he were well acquainted with the local conditions and requirements of the institutions with which the Commission has to deal.

THE House of Commons is unwilling to trust County Councils with the duties now performed by Government departments until they have shown their fitness to exercise these functions. They must, indeed, prove their capacity for government before they will receive all the powers which the Local Government Bill as originally drafted would have conferred upon them. Mr. RITCHIE has, in fact, accepted an amendment to this Bill by Mr. CHAPLIN which will enable these powers to be transferred by means of provisional orders, but the County Councils will not be immediately endowed with the authority now exercised by the Local Government Board under the Public Health Act. If no other advantage is gained by this decision than that of postponement, it will still serve the purpose of enabling fuller consideration to be given to the effects of the proposed transference of functions of control to intermediary authorities.

It will probably be accepted by all that the State should reserve to itself some power of requiring the provisions of the Public Health Acts to be put in force in every district. There must inevitably be, in the future, instances of local neglect both in District and County Councils, concerning which the Government will desire to interfere. There must as certainly be occasions when foreign Governments will consider that the sanitary condition and administration of an English port is a matter of concern to their own ports receiving shipping therefrom, and trade interests may thus eventually be affected by the inability of the central government to exercise proper control over local authorities. It may of course be argued that the Local Government Board has not frequently availed itself of the opportunities given by Section 299 of the Public Health Act for providing at the expense of a defaulting authority sufficient sewers and water supply. Admitting this, it has nevertheless been useful to possess these powers, and this fact of possession has doubtless aided the Board in convincing local authorities of the advisability of complying with its recommendations. For the central department to divest itself suddenly of these powers, to transfer them to new and untried authorities, and to make no provision for the exercise of control of its own in the future, is a mistake which surely is suggestive of want of interest in the public health.

We note with pleasure that Sir LYON PLAYFAIR is watching the course of events, and that he is endeavouring to make the Bill serviceable to the health interests of the country—a quality, which we pointed out when the Bill was first published, that it neither possessed nor was intended to possess. Perhaps the decision of last Tuesday will lead to more attention being devoted to the public health service than it has lately received. A little statesmanship is sadly wanted to arrange the relative positions of the central authority with that of the County and District Councils. It is clear that the County Council cannot be trusted at once to replace the Local Government Board, which has not been without its influence for good. Perhaps the very chaos which now exists will render it necessary to devise some

reasonable system by which health administration will not be left entirely to the will of locally elected authorities or of a department burdened with other duties.

Annotations.

"Ne quid nimis."

ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS.

As we announced last week, a general meeting of this Association will be held on Thursday, July 5th, at 2 P.M., in the Arbitration Room, at the Inns of Court Hotel, Lincoln's-inn-fields, when questions of some importance will be considered. It may be well to remind our readers, and especially those who are Fellows of the College, that this Association was started in 1884 to consider all matters relating to the constitution, government, and administration of the College, whether in its corporate, examining, academical, or political capacity, and to promote the general interests of the Fellows of the Royal College of Surgeons. The present objects of the Association are: 1. To obtain for Fellows and Members a larger share in the management and control of collegiate business. 2. To ensure that no alteration in the constitution or relations of the College shall be effected without the consent of the Fellows and Members convened to discuss such alteration. 3. To insist that there shall be an annual meeting of the Fellows and Members, at which the annual report of the Council shall be presented, received, and (if approved) adopted. 4. To secure that the President of the College shall be elected by a majority of the Fellows from the past or present members of Council. Amongst enlightened men there can be no doubt as to the propriety of the first three objects; it is rather a matter of surprise that the body corporate of the College has not long before insisted upon their acceptance. With regard to the fourth point—viz., the election of the President of the College by a direct majority of the Fellows from the past or present members of Council,—we are of opinion that its adoption would not only enhance the prestige of the office of President, but would also be a direct inducement for Members to become Fellows of the College. The present entanglement at the College on the subject of Sir Joseph Lister's retirement, the perplexed conduct of councillors, and the loss of the right man in his right place as President, would have been avoided had but the recommendations of the Association of Fellows been accepted by the Council. These anomalies have been ably and repeatedly exposed, and were placed before the profession in a true and clear light by Mr. John Tweedy on the 16th inst. Moreover, the Association of Fellows waited (by deputation) on the Council at the College on March 3rd, 1885, and on the Lord President of the Privy Council at Whitehall on Nov. 11th, 1887, in furtherance of their objects of just reform, and as a proof of their earnestness in thought, word, and deed. The Council of the College has so far exhibited an indifferent or repellent attitude to the demands of the body corporate (both Fellows and Members). We advise all Fellows who approve of the objects of reform not to remain passive any longer, but to join hand in hand, heart and soul, with the Association of Fellows, and give in their names to the Honorary Secretary, Mr. H. Allingham, 36, Grosvenor-street, W. The agitation, by all legitimate means, must continue. The programme of the Association is an open and moderate one, and is similar to what is followed in other collegiate establishments and learned societies. Its power must be impressed on the Council, for every seat that is filled by a man of modern and really liberal views is a distinct gain to the College, to the Fellows, to the general profession, and to the public.

THE ETIOLOGY OF EPIDEMIC DIARRHŒA.

LEICESTER, which has so long been a centre of interest in connexion with the subject of epidemic diarrhœa, has from time to time contributed to the literature of the prevention of this disease, and the paper which has recently been prepared on the subject by Dr. Henry Tomkins, the health officer to the borough, is amongst the most valuable of those contributions. The report shows, in the first place, that the diarrhœa is not confined to infants; that all ages, classes, and occupations are attacked; and that of nearly 10,000 persons known to have suffered during last summer almost two-thirds were twenty years of age and upwards. This statement bears out the contention that neglect in the rearing of children is not a prime cause of the disease, and in view of it we can the more readily accept the assurance that so far as pertains to the care of infants Leicester is, apart from the incidence of diarrhœa, much on a par with other towns of its class. During the summer of 1887 Dr. Tomkins had been engaged in making investigations as to the excess or otherwise of micro-organisms and their spores in the air of various parts of the town, and he found them varying in number from 6000 to 1600 per cubic metre, the latter record coming from a district outside the "diarrhœal area." Cultivation also revealed the fact that the different forms of bacteria and other organisms met with were more numerous within than outside that part of the town where the summer diarrhœa is most common; and it was also ascertained that exceedingly small quantities of the infected liquefied gelatine which resulted from the cultivations, and which swarmed with the micro-organisms in question, sufficed, when taken into the system, to induce a smart attack of diarrhœa, lasting several hours. Leicester did not always suffer as it now does; and examination of the vital statistics goes to show that it was not until about 1850 that the deaths in the third quarter of the year became excessive. About 1851 evidence became apparent as to filthiness of soil in certain parts of the present borough, and it is clear from the information now available that the geological circumstances of a large area of the town are such that the soil, continuously liable to pollution, has scarcely had any chance of purification, and that periodical flooding of the river and overflow with leakage from sewers have sufficed to keep it more or less constantly contaminated, if not actually sewage-sodden. Such a soil, containing as it does much dead organic matter, is, when heated, precisely such as to favour the growth and development of low forms of organic life; and it is now well known that with the advent of warmth sufficient to penetrate the earth there has always been an increase of diarrhœa deaths over that part of Leicester where the above-named favouring conditions obtain. Indeed, as the result of his experiments in this matter, Dr. Tomkins finds that soon after the temperature of the earth, at a depth of one foot, has reached from 59° to 62° F. the cause producing epidemic diarrhœa comes into operation. Speaking generally, Dr. Tomkins regards it as abundantly demonstrated, both by a process of exclusion and from positive evidence, that the diarrhœa observed in Leicester is "due to something in the air," and it is implied that this "something" is to be found in the microbes which have been detected and subsequently cultivated and experimented on. But, all along, these micro-organisms are dealt with collectively; and no differentiation of the several species seems to

have been made with a view of ascertaining whether some of them are pathogenic, whilst others may be harmless. And it is probably because of the incompleteness of the inquiry in this connexion that we are reminded in the report that the investigations made in Leicester only formed a part of the much more extended inquiry which has been going on for the purposes of Dr. Ballard's investigation into this subject in various parts of the kingdom. The Leicester facts need comparing with those obtained by other local officials in other towns and districts, both where diarrhœa prevails and where it is absent; and we do not doubt that when the preliminary official report—which, as we are reminded by Dr. Tomkins, will soon be forthcoming—is issued, we shall find that the micro-pathological and biological aspects of the question, which hitherto have only been dealt with in a very general way, will be discussed in much more exhaustive fashion. But, in the meantime, Dr. Tomkins has afforded valuable information as to some of the lines on which the more general research is proceeding.

LIFE PEERAGES FOR MEDICAL MEN.

IT is satisfactory to note that the House of Lords has begun seriously to contemplate the advisability of increasing at once its membership and its practical efficiency by the creation of a certain number of life peerages representative of the various working energies of the nation. In introducing a Bill dealing with this subject, which was read for the first time on Tuesday, Lord Salisbury referred to the claims of the public services, civil and military, of commerce and manufacture, to representation under the proposed new conditions. Other interests, though not particularised, were referred to in general terms. Among these we cannot reasonably doubt that the claim of medicine to be consulted in the debates of the upper House has received a share of consideration. In a former issue we advanced certain reasons why the bestowal of peerages upon selected members of our profession would be at once a decorous act on the part of the State and an advantage to the whole body of medical practitioners. We then discussed the social aspect of the question, and showed with sufficient clearness that our work and workers are alike deserving of recognition in the constitution of the British Senate, and that men eligible for promotion to its ranks alike in respect of ability and of personal influence will not be lacking in case their services are required. We may now speak with even greater force of the utility of such members in the discussion of various important questions. This is really the point of greatest consequence, and Lord Salisbury, as was to be expected, has emphasised it in his recent speech. However desirable it may be for men in our or any calling to attain eminence, we must remember that this is, after all, the second consideration. It is, moreover, compatible with other conditions besides that of high social preferment. We do not, therefore, desire such advancement for the medical profession out of any mere greed of *éclat*. It is with a consciousness of the active influence thus acquired, with a desire for its fit disposal by the State, and with a conviction of the responsibility for public service which attaches to each peer in his legislative and consultative capacity, that we make our request. An argument in its favour which is based on considerations of utility need not indeed be difficult to follow. When we consider how intimately the technical knowledge of the physician and surgeon is interwoven with every department of public work and with all matters concerned in sanitary legislation, how potent for the common good as well as the well-being of individuals have been the results of modern discoveries in medicine, and how fully liberal their application, we cannot but feel that the honour of peerage conferred on representative medical men would be repaid by a distinct increase in the debating power of the Upper House. Lord Salisbury would then, we feel certain, realise in a definite proportion the object of his proposal, that of "strengthening the House of Lords, and of giving it a power of adding to itself that which is powerful and strong, and of doing its duty better before the country."

EDUCATION IN SWIMMING.

WE have repeatedly directed attention to the necessity of finding for all, but especially for the young, the opportunity of education in swimming. Alike as a means of muscular exercise and as an indispensable faculty in the not improbable event of sudden accidental immersion, its position as a needful branch of physical instruction is unassailable. It requires the exertion in greater or less degree of nearly every voluntary muscle in the body, and by opposing to the action of these the moderate resistance of water pressure supplies what is practically a light and most enjoyable form of gymnastic movement. Nor should we omit to mention the mental advantage possessed by it as an aid in educating the quality of self-reliance. Happily our island shores afford many facilities for learning the art of swimming, while even in some of the larger cities, notably the metropolis itself, the existence of an ample river, whether it be itself pure enough to invite the bather or not, affords the means of an abundant water supply for baths of large size. We also observe with satisfaction that even in the inland towns there is a disposition to treat the question of instruction in swimming as one of really practical importance. A citizen of Huntingdon, writing in the daily press recently, advised the formation in that town of a floating bath of large size divided into two chief sections: one to contain water about three feet and a half deep; the other, for swimmers, to be considerably deeper. The estimated cost of such a bath is £70, and if this be the correct figure there seems no reason why every town with an available river might not offer its inhabitants the advantages to be derived from so useful an institution. We would suggest also that, wherever possible, some provision should be made to teach swimming to the frequenters of such a bath or baths.

EXTRA-PERITONEAL HEPATOTOMY.

DR. L. MCLANE TIFFANY of Maryland describes, in the *American Journal of the Medical Sciences* for June, two cases of hepatic surgery in which he adopted the precaution of shutting off the area of the liver operated upon from the general peritoneal cavity. The first case was a man with an abscess in the liver, near the upper surface of the right lobe. This was first found by an aspirator introduced in the axilla at the level of the nipple. Ten days later an incision through the abdominal wall was made parallel with, and just below, the right costal arch. The cut edge of the parietal peritoneum was freed a little, and then sewn to the surface of the liver with a fine and close continuous suture, leaving a surface of the liver 1 in. by 2 in. shut off from the general peritoneal cavity. A large cannula was passed through this for a distance of *three inches* before the abscess was entered; a free incision into the abscess was then made, and a drain introduced. The patient made a good recovery. The second case was one of gall-stones. On opening the abdomen, the gall-bladder could not be exposed, owing to dense adhesions all round it. So the parietal peritoneum was closely sutured to the surface of the liver immediately above the gall-bladder, and an incision was made through the liver into the gall-bladder and the stones removed. In this case also the patient recovered. These cases are a valuable addition to hepatic surgery, for they show that the practice found so valuable in other cases, such as gastros-

tomy, can be equally well carried out in hepatotomy. The hæmorrhage caused by the puncture of the surface of the liver was easily arrested by pressure. But more important than this is the evidence these cases afford of the innocuousness of even deep incisions through the liver. How best to deal with abscesses or hydatids deep in the liver, especially on its upper surface or near the vertebral border, is an unsolved problem at present, and Dr. Tiffany's cases may afford some clue to the best answer.

THE NEW CANDIDATES FOR ELECTION ON THE COLLEGE COUNCIL.

IN our last issue we dealt briefly with the claims of two surgeons who are candidates for re-election on the Council. The names of the three applicants who have not previously sat on the Council are Messrs. Couper, Pick, and Norton, the respective dates of their Fellowship being 1861, 1866, and 1867. Messrs. Couper and Norton are, *imprimis*, well-known and able officers, both senior surgeons at their respective hospitals, and men of fixed resolve; both of whom entertain liberal views on the subject of collegiate reform, and are known to be in general agreement with the objects of the Fellows' Association. Both candidates (if elected on the Council) would render marked and important service to the College by their knowledge and good common sense. Mr. Pick has the credit of being one of the best examiners in London, and holds high rank as a general surgeon—he does not pledge himself to any course of conduct; he (if elected) will enter the Council with an open mind; and on all occasions will act in the manner that, in his judgment, seems best for the welfare of the College. We are inclined to think that, as elections on the Council progress, far more definite pledges will be exacted by its constituents than heretofore. Surgeons are but cast in the same mould as other men. In the ordinary form of representative government certain recognised paths of conduct are insisted on, and distinct promises on vexed subjects are given. This custom by no means fetters a representative's judgment on free ground; it is but an obligation that on certain tender spots certain remedies approved by the majority shall be applied, and corporate bodies are wont to demand that the principles as well as the practice of their deputies shall be understood both by the senders and the sent. Members of our profession, we fear, are not always good men of business; they require the common sense brake of criticism to be applied occasionally to steady their oscillation, and what is of greater cogency in the present argument, councillors at the College on first entering upon their duties are apt to be overcome by influences peculiar to their situation; they are all the better for having a "Ready Reckoner" with them in the form of a correct answer, already worked out for them by their constituency, to a definite question.

ESPIONAGE IN PUBLIC SCHOOLS.

THE system of authorised espionage at Hailebury College, which has been brought to light by the prolonged action but probably not yet concluded litigation against the governors of the College for the expulsion of a boy owing to a suspicion of theft which has turned out to have been ill-founded, is a form of objectionable practice not uncommon at other public schools. The evidence revealed that some fourteen other boys had been expelled during the past four years; some for suspected theft, others for indecent conduct. The question naturally arises, how many of these fourteen boys have been expelled on false suspicions? That the master acted with the best intentions no one can doubt; but this is poor consolation to the parents. In theft at school, in most cases the temptation arises from the too lax provision for the care of pocket-money. There should be a school bank, into which all pocket-money and gifts of money from friends should be safely placed, to be drawn on by cheque as the boy requires it. It should be against rules for money to be kept about unguarded. "Lead us not into temptation" is, or should be, the daily prayer of every school boy, and it should be the daily care of every school master to keep needless temptation out of his pupils' way. The disposition to pilfer among school boys is a very common one. They take and use each other's books, cricket caps, stumps, and various other small possessions. The consciousness of the impropriety of this grows with years, and is avoided as manhood is reached. But in the school boy this disposition to pilfer may take the form of actual theft if coin unguarded is placed in his way. To educate and strengthen a boy's moral character is of equal importance to the cultivation of his intellectual powers.

DISAPPEARANCE OF HYPERTROPHY OF THE TONSILS IN SCARLATINA.

DR. D. E. CORMINAS relates, in a Barcelona medical journal, the case of a little girl nine years of age, who suffered from very great enlargement of the tonsils, which had been increasing for some years. Last winter, however, she was attacked by scarlatina, which was accompanied by an alarming amount of throat affection. On the fourth day it was found that the tonsillar enlargement had entirely disappeared. The little patient made a good recovery. Here the scarlatinal process produced a more complete cure than any caustic or removal by the knife could have done, the fossæ behind the pillars of the fauces appearing perfectly normal. A somewhat similar case, in which diphtheria had destroyed hypertrophied tonsils, was reported some time ago in the *Revista de Ciencias Médicas* by Dr. Simonena.

THE AMOUNT OF THE HOSPITAL SUNDAY FUND DISTRIBUTION.

IT is perhaps right, in order to guard against a possible misunderstanding, that we should point out to our readers that the total amount of income received from the Hospital Sunday Fund by the hospitals enumerated in our Tabulated Statement on the 9th inst. is not the whole amount distributed by the Council of the Fund. We referred in our preliminary notice to a number of small institutions which for various reasons did not come into our list. Furthermore, a sum of about £1800 is annually expended by the Council upon surgical appliances, and this, of course, did not enter into the figures presented by us. Thus, upon the whole, our total fell short of the Hospital Sunday Fund distribution for the year 1887 by about £3750. We mention this matter, although the fact is fairly plain upon the face of our table, lest an incomplete statement should, in the mind of any readers who may not have perceived its limitations, have done an injustice to the Hospital Sunday Fund work. The total amount of the 1887 distribution was £39,161.

A FATAL SEQUEL TO A PRACTICAL JOKE.

THE relationship between mental shock or worry and disease, though not always readily traceable, is in certain cases so clearly indicated by the sequence of events as practically to justify a belief in its existence. In judging of every such case, however, we must be careful to avoid the fallacy of confusing what is *post* with what is *propter hoc*, and it is probable that no department of knowledge is more open to mistakes of this kind than the sphere of medical diagnosis. All due precaution must therefore be observed in tracing the real cause at work in such cases as the following. A young girl residing near Bury St. Edmunds, and recently in service, returned home in a state of fright,

which resulted in maniacal delirium and death. While in her last situation she had been terrified, it was said, by an apparition in her bedroom, and this was understood to be the outcome of a joke practised upon her by two fellow-servants. As to the connexion between her state of alarm and its alleged cause there seems to be no doubt. The question is whether fatal mania—the certified illness—could have had such an origin as that here attributed to it. In forming an opinion on this point, we should remember that mania as a disease acting *per se* is not usually fatal. In the case before us, which in one statement is described as "brain fever," maniacal excitement probably coexisted with encephalitis or meningitis. It is conceivable that these conditions might originate in mental over-action from worry or anxiety, either of which causes is also liable to result in ordinary mania. It must be allowed, however, that consequences so serious do not by any means commonly follow a transient shock of terror, and their deplorable termination in the instance already quoted had probably a second and important source in the feeble nervous organisation of the unfortunate girl. This consideration must materially qualify our judgment on the perpetrators of so cruel a jest, though no explanation can excuse their heartless conduct from the very serious blame which in any case attaches to it.

SMALL-POX IN LAUSANNE IN 1884 AND 1885.

DR. EUGÈNE DE LA HARPE has published a short account of an epidemic of small-pox which occurred in Lausanne, lasting from the summer of 1884 to the spring of 1886. Of fifty-nine cases treated by him privately and in a temporary hospital which was erected by the municipal authorities, and of which he had charge, thirty-one were classed as varioloid; all these recovered. Of the remaining twenty-eight cases of variola eight proved fatal. The epidemic appeared to have been introduced by some Italian railway labourers, whose habits were most uncleanly. Where possible, the patients were moved to the hospital, and accommodation found for the other inmates of their rooms while the latter were disinfected with sulphurous acid fumes. Owing to a want of stringency in the law, these measures could only be taken when the people were willing, and sometimes they defied the sanitary authorities altogether, thus making it exceedingly difficult to stamp out the epidemic. Dr. de la Harpe thinks that amongst persons of the lowest class a notice ought to be affixed to the door giving warning of infectious disease within.

CURDLING OF MILK BY MICRO-ORGANISMS.

AT the meeting of the Chemical Society on the 7th inst., Mr. R. Warrington read a paper on the Chemical Action of some Micro-organisms, in which he showed that the curdling of milk by micro-organisms is effected either by the production of lactic acid or apparently by the formation of a rennet-like ferment. The amount of lactic acid required to curdle milk depends on the temperature, the amount being smaller the higher the temperature. Five of the organisms he examined distinctly acidified milk, but in very different degrees; thus Staphylococcus candidus produces too little acid to cause curdling, even when the milk, after acidification, is placed in boiling water. The bacillus of infantile diarrhœa and B. termo produce a greater acidity, curdling milk speedily at 32°, but failing entirely to curdle it at 22°. M. gelatinosus curdles milk speedily at 22°, and even at 10° after many days. The two organisms, B. fluorescens liquescens and Koch's cholera spirillum curdle milk readily at 22°, without producing any appreciable acidity; the latter organism will, indeed, curdle milk made alkaline with sodium carbonate without destroying the alkalinity. We have here, apparently, a typical case of curdling by means of a ferment. Two of the acidifying organisms which curdle milk, M. gelatinosus and M. ureæ, act apparently in part by means of a ferment, as the acidity produced by them when the milk is curdled is quite insufficient in itself to effect curdling at the temperature of the experiment. Soil from an arable field readily curdles milk, even at 10°, but without producing at the time an appreciable acidity; it acts plainly by a ferment. During the action of soil on milk much gas is evolved, even at 10°. No gas was observed during the action of any of the organisms examined, save in an experiment with the bacillus of infantile diarrhœa at 37°. Some researches on nitrification in soil were also referred to, Mr. Warrington explaining that he proposed to make a thorough investigation of the micro-organisms contained in soil. In reply to Dr. Percy Frankland, who remarked upon the great difficulty of sterilising milk, he said he had had no failures, his results being constant; this success he attributed to his having used fresh country milk milked directly into sterilised bottles.

PROFESSOR RUMPF ON PHENACETINE.

PROFESSOR RUMPF of Bonn, in a paper read before the Cologne Medical Society last month, gave his audience some account of his experience of phenacetine. The conclusions to which he came were that phenacetine is free from any unpleasant effects, and that it acts with remarkable certainty as an apyretic, the dose being for adults eight grains and for children from three to four grains. In doses of fifteen grains it is valuable in neuralgia (*a*) where the affection is due to vaso-motor disturbance, (*b*) in the lancinating pains of tabes and neuralgia due to chronic neuritis, and (*c*) as a palliative in other forms of neuralgia. Being insoluble, phenacetine may be administered in capsules or it may be placed dry on the tongue. Professor Rumpf has never found nausea, vomiting, failure of the heart's action, or cyanosis follow even fifteen-grain doses.

THE HULL SANITARY ASSOCIATION AND FUTURE SANITARY ADMINISTRATION.

THE Hull Sanitary Association, in common with other bodies and individuals having public health interests at heart, regard several portions of the Local Government Bill with more than doubt. They especially object to such provisions as do away with a settled and uniform principle of continuing to the Local Government Board an effective control over sanitary authorities, and they say definitely that the effect of the Bill with regard to public health will be to perpetuate the unsatisfactory condition of the sanitary oversight of country districts. In one respect we think the Association are in error. Thus, they imply that as regards all the large boroughs which by the Bill are created into separate County Councils, the singular anomaly will exist that the body having statutory duties to perform relating to the public health and sanitary matters generally will be the identical body to whom the powers of control in case of default in the performance of such duties are transferred, and that there will be no independent control whatever in all those cases in which the powers of the Local Government Board are transferred to the County Councils, however serious may be the neglect of the local authority in the performance of statutory duties. This is hardly the case, for the Bill itself provides that in cases where the power of compulsion as to sanitary matters are not vested in the newly constituted County Councils—as, for example, in the case of boroughs which will remain exempt from the superintending county body,—such compulsory powers as those named in Sections 42 and 299 of the Public Health Act, remain, as heretofore, with the Local Government Board. Indeed, it would appear that such boroughs as have secured, or may still secure, this

form of exemption under the Bill, will have a sort of privilege in being subject to the central authority only in such matters as the making of default, whereas the District Councils outside the exempted boroughs will be, for similar purposes, subject to the new county authority. Whether the Bill will pass or not in that form remains an open question; but it is evident that the smaller or non-exempted boroughs are, under the circumstances, not regarding with pleasure the transference of the powers in question from a Government department to a county body. The Hull Sanitary Association also press that medical officers of health should be the officers of the County Councils, and not of the District Councils; and unless the Local Government Board should decide to retain the small amount of control they now exercise over such officers and their appointments, pressure will doubtless be brought to bear upon the Government to modify the Bill in the sense indicated by the Hull Association.

THE NEW MASTER OF DOWNING COLLEGE.

WE note with pleasure the election on the 16th inst. of Dr. Alexander Hill as Master of Downing College, Cambridge. Born in 1856, Dr. Hill took his degree with distinction in Botany, Zoology, Comparative Anatomy, Human Anatomy, and Physiology, in the Natural Science Tripos of 1877. After a short residence in Cambridge he completed his professional education at St. Bartholomew's Hospital, becoming a member of the Royal College of Surgeons of England in 1880. He was elected a Fellow of Downing shortly afterwards, became M.B. in 1882, and M.D. in 1885. On returning into residence he was appointed Demonstrator of Anatomy and Teacher of Physiology in the University. Twice in succession he held the post of Hunterian Professor of the Royal College of Surgeons, and has published "The Plan of the Central Nervous System," as well as contributions to various medical journals. In 1883, 1884, and 1885, and again in 1887 and 1888, he acted as examiner in the Natural Sciences Tripos. He was also examiner for the M.B. examinations, and has recently been appointed examiner to the Glasgow University. The appointment to the Mastership is in certain respects unique. A headship has not fallen to an anatomist since Harvey was Warden of Merton, and very rarely to a member of the medical profession. The new Master owes his position entirely to his success in the medical school at Cambridge, and the fact of his election is a proof of the increasing hold which science, and especially medicine, is acquiring in the universities.

MODELLING CLAY IN MASTITIS.

DR. E. L. MAÏZEL mentions in the *Vrach* (No. 21) that he has for some time employed modelling clay as an application in mastitis, with excellent results. The idea was obtained from Dr. S. Lukashevich, who employed white modelling clay in epididymitis. Dr. Maïzel has made use of it in twelve cases—seven of parenchymatous inflammation, of which only three suppurated; and five of phlegmonous inflammation, of which only one went on to form an abscess. The pain was rapidly alleviated and the fever diminished by this treatment, which, if commenced sufficiently early, appeared to cause the inflammatory process to terminate in resolution without the formation of pus. When abscesses had formed and broken, the wound rapidly healed, and the indurated lobules returned to their normal condition without suppurating, the clay proving a much less troublesome treatment than Kiwisch's plan of starched bandages, and much less painful than the application of collodion, as recommended by Latour and Sprengel, being at the same time quite as satisfactory in its results. This method is especially suitable for country practice, as white modelling clay is a very common and cheap substance, and patients take to the treatment very kindly, the application being always grateful to them. The capacity for heat possessed by clay being considerable, it answers the purpose of ice-bags or cold compresses, and is greatly preferred to them by patients. The method of application is simple enough. The breast is first washed with a sponge and a piece of soft gauze applied to it. Another piece of gauze is then cut to the proper size, an aperture being made for the nipple, and an even layer of well-mixed clay, free from lumps, spread over it. This is then applied to the breast over the first piece of gauze, and secured by a bandage passing over the shoulder of the opposite side. The dressing is renewed night and morning. This kind of treatment is also applicable in distressing fulness of the breasts, when for any reason the patient cannot suckle the child. The secretion is arrested and the fulness and tenderness often disappear in the course of twenty-four hours.

WEIL'S DISEASE.

THE modern tendency to name diseases after the physician who first describes them is due to the difficulty of determining their true nosological position. Hence, however much the practice is to be regretted, there seems to be some difficulty in avoiding it. Amongst the latest additions to the category of "unnamed" disorders is a striking febrile affection, which was first described by Weil in 1886. Its symptoms are those of an acute fever, of comparatively short duration, but accompanied by jaundice, swelling of the liver and spleen, nephritis, and severe nervous symptoms. In the current issue (No. 12) of the *Fortschritte der Medicin*, Dr. Unverricht collates the records of cases of this "disease" which have been described since the publication of Weil's paper. Thus Dr. Goldschmidt gave one from the Nuremberg clinic. Dr. Aufrecht referred to two cases published in his Pathological Reports, which seemed to fall under this head. The one supervened in a phthisical patient, who was suddenly attacked with jaundice and albuminuria. The other was in the case of a previously healthy man, who died from uræmia, after an attack of fever, with jaundice, enlarged liver, albuminuria, and finally suppression of urine. After death the chief lesion consisted in abundance of dark granules in the renal and hepatic cells, and Aufrecht termed the condition "acute parenchymatosis." Wagner related two cases of acute fever, short in duration, with jaundice and albuminuria, muscular pain, especially in the calves of the legs, and slight enlargement of spleen. Both commenced with labial herpes, and epistaxis occurred frequently. Wagner was inclined to class these as "bilious typhoid." Roth gives a parallel case, which he attributed to "salad poisoning." Haas records ten cases, all marked by fever, jaundice, splenic swelling, gastric disturbances, headache, and myalgia (especially in the calves). In his cases the liver was not often enlarged; albuminuria occurred occasionally, and some suffered from herpes. He was inclined to class these cases with abortive typhoid, for they occurred during epidemics of typhoid fever. The most exhaustive and latest contribution to the subject is a paper by Fiedler, who has collected thirteen cases. He points out that the disease begins suddenly, without prodromata, often with a rigor; also high fever, headache, gastric disturbance, jaundice, and myalgia (in the calves). The pyrexia runs a typical course, lasting eight or ten days; then subsides by crisis, occasionally having a short relapse. The pulse-rate is frequent at the first. Swelling of the spleen and liver is frequent, but not invariable; and nephritis often occurs. Occasionally there is herpes and erythema. The prognosis is favourable. The patients are mostly males in the prime of life; the disease occurs chiefly during the hot season. Fiedler believes it to be a specific infective or toxic disorder, and contests the view that it is at all related to typhoid; its

sudden onset, the course of the pyrexia, the early appearance of jaundice, the absence of pulmonary catarrh, the herpetic and erythematous rashes, and indeed almost all the symptoms, being opposed to that idea. Moreover, if Aufrecht's two cases were examples of Weil's disease, they neither of them showed typhoid lesions in the intestine. It is noted that nine out of Fiedler's thirteen patients were butchers, a fact which may prove of etiological value.

THE LATE EMPEROR OF GERMANY.

IN another column will be found a short report on the recent condition of H.I.M. the late Emperor of Germany, furnished by Sir Morell Mackenzie, together with his statement as to the nature of the case, made immediately before the post-mortem examination. Up to the present time no complete account of the case has been published, and even the full details of the post-mortem examination have not been made public. We must therefore postpone any comments on the many important questions that it raises until we have all the facts before us. We can now only say that the post-mortem examination showed what our readers must have known long ago—that the disease was cancer in an aggravated form.

SMALL-POX IN THE NORTH.

ENERGETIC measures are being adopted to stay the progress of small-pox in Preston. Owing to the sudden onset of the disease the authorities were unprepared to cope with it, and the needed means of isolation were not available. There is a hospital near the workhouse which, it is stated, can take in some 300 patients, and which has hitherto been of little use, but since it is vested in the guardians of the poor it could only be legally used for pauper persons; unless, indeed, the building could temporarily be transferred to the corporation, who are the sanitary authority. In the meantime further progress is being made with a temporary erection in Moor-park; but, like most temporary erections, its usefulness will, it is feared by many, come too late. Much the same is being done at Skipton, where a temporary hospital is being put up after the need for it has to a large extent passed away. At Hull, small-pox is said to show no indications of abatement. So far the type is mild, but there are some forty patients under treatment in the borough hospital.

THE MEDICAL FACULTY OF BARCELONA.

THE first stone of a new medical faculty and clinical hospital for Barcelona was laid on May 28th. There was, of course, a great ceremony, the Minister of Education and all the municipal and university authorities being present. The Government has assigned a million dollars for the buildings, and the local authorities have given the site. These works, as it would seem from the Barcelona correspondence of *El Siglo Médico*, have not been begun a moment too soon, as the hospital, lecture-room, and laboratory accommodation in Barcelona is at present of the most meagre and unsatisfactory description. The hospital of Santa Cruz is pervaded, not only in the wards, but in the staircases, by a powerful smell. The beds are arranged in double rows along each side of badly lighted and badly ventilated walls, the foot of one bed touching the head of another, and the space at the sides of the beds scarcely allowing the attendants to move about. There are no ventilating arrangements, the air renewing itself as best it can. Notwithstanding all this, however, it is satisfactory to learn that, thanks to extreme care taken by Dr. Morales in attending to antiseptic measures, he has not lost a single one out of eighty cases of major operations performed this year. With regard to the medical school, it cannot, strictly speaking, be called a university, as it is unable to grant the M.D. degree, which Madrid alone has the power of conferring. The lecture-rooms are small, dirty, and badly arranged, the dissecting-room confined and dark, the laboratories ill supplied with materials, and the library of but little use. In striking contrast to this is the new municipal laboratory under Dr. Ferrán, as well as two private laboratories belonging to Drs. Barraquer and Pi, all of which are well arranged and replete with every necessary for bacteriological research. Indeed, according to the author of the letter, the municipal laboratory is worthy to rank amongst the first in Europe.

THE REPORT ON EXPERIMENTATION ON LIVING ANIMALS.

IN his report Mr. Erichsen states that the number of cases in which pain has been unavoidably inflicted during experiments conducted under the operation of certificates—which dispense with anæsthetics in cases in which they would frustrate the result of the experiment, or with the killing of the animal on recovery from anæsthesia—is seventy-one, or 5·8 per cent. of the total number of experiments. Of these, two were physiological, twenty-one pathological, and forty-eight therapeutical. In one case only, that of a therapeutical experiment, specially protected under Certificate E, was an animal subjected to pain. It is important to observe that comparatively few "vivisections," properly so-called—that is to say, experiments involving a distinct surgical operation on a living animal,—have been practised during the past year. In all cases in which such experiments have been performed under Certificate B (dispensing with the necessity of killing the animal before the effect of the anæsthetic has passed away), it has been made a condition that the wound should be treated antiseptically and thus be rendered practically painless, and that in the event of the antiseptics failing and the animal suffering pain it should be destroyed. Mr. Erichsen has every reason to believe that this condition has been faithfully fulfilled by those on whom it was imposed. We have read this report with satisfaction, because of the care which the inspector evidently takes to prevent any infringement of the law.

HOSPITAL SATURDAY FUND.

WE are glad to notice a healthy dissatisfaction with past performances in the Council of the Fund, especially with regard to collections in the workshops. The street collection, which is fixed for the 14th of July, is expected to show considerable advance. It has steadily increased from £258 in 1874 to nearly £5000 last year. We agree with Lord Brassey, President of the Fund, that £50,000 would not be too great a contribution from the working classes of London to the institutions by which they so largely profit.

THE DANGERS OF A COLD SUMMER.

REPORTS from Aberdeenshire testify to the prevalence of unusually severe weather in the upland districts of that county. For the first time during many years snow fell heavily in the earlier part of this month, covering the ground to a depth of from three to six inches. The damage done to trees at this time in full foliage by the breaking of branches under their snowy load was considerable, and cattle are said to have been in great straits from the impossibility of access to their grazing ground. In the south we have not suffered so much as our northern neighbours; but the current month and that of May will probably be remembered by medical practitioners here and elsewhere on account of the unusual coldness and uncertain variations

of wind and weather. They will almost certainly be found to have left their mark upon the public health in an unexpected prevalence of pneumonia, pleurisy, and allied inflammatory ailments. The time-honoured and truly wise injunction with regard to change of clothing during May might this year be transferred with general advantage to our chilly June. Particularly should the elderly and the very young be clad with careful regard for sudden changes in the outer temperature, and if any one point more than another should be emphasised in making such arrangements, it is the great advantage, almost the necessity, of wearing next the skin a layer of woollen material.

UNIVERSITY COLLEGE HOSPITAL.

LORD HERSCHELL presided at the public dinner in aid of the funds of this institution, which took place at the Hôtel Métropole on Tuesday last. A large and distinguished company were present. His lordship urged the claims of the charity upon public benevolence, observing that the number of patients had greatly increased during the past year, and the funds of the hospital were still deficient in relation to its needs. He alluded to a scheme on foot for rebuilding the hospital, and trusted that when that was done they would, with the assistance of the public, have a building befitting the great work the institution was doing for the inhabitants of London. The donations in connexion with the festival amounted to over £1900.

INTRA-PULMONARY INJECTION OF CREASOTE.

DR. T. STACHIEWICZ of Görbersdorf has followed up the attempts to arrest tuberculosis by deep injections of creasote into the substance of the lung, which met with such favourable results in the hands of Dr. Rosenbusch (see THE LANCET, p. 643, March 31st, 1888), but without being able to show nearly such good effects; indeed, in one case fever and hæmoptysis came on, and the cough and expectoration increased. Notwithstanding his unpromising results, Dr. Stachiewicz is disposed to think that intra-pulmonary injections of creasote may perhaps be of service where the cavities are superficial, or where there are hydatids or gangrene of the lung, and he suggests that it may perhaps be resorted to in some desperate cases of phthisis merely as a last resort.

ICTERUS NEONATORUM.

SEVERE icterus neonatorum is usually observed, according to Kehrer, on the second or third day after birth. Baginsky noted the first discolouration on the face and breast, the abdomen, extremities, and eyes being affected later. Frerichs found the weight of the liver in the seven-months' fœtus to be 1-17th of the weight of the entire body, and in the fœtus at term 1-25th; in a child aged sixteen months it was only 1-33rd; it is larger in the mature fœtus than both the lungs, according to Beneke and Baginsky. The red corpuscles, which number from six to seven millions per cubic centimetre on the first day of life, are found to number only from four to five millions on the fourth or fifth day. Hofmeier ascertained the size of the red corpuscles to be very variable; that they are more spherical than in the blood of adults; that they show no tendency to form rouleaux; that the white corpuscles are often in greater proportion than in adult's blood, and that they accumulate in rouleaux; that they are viscid, deliquescent, and easily destroyed. Ponfick and Silbermann found "shadows" of red blood-corpuscles to be more abundant the greater the disturbance during the first days of life. Silbermann injected hæmoglobin into the blood of frogs, dogs, and puppies, and found that the changes in the blood, urine, and liver corresponded with those which are seen in new-born infants during the first days of life. Hofmeier showed that in jaundiced infants during the first ten days of life there was a decided loss of weight and a great increase in the elimination of urea, uric acid infarcts, and albumen. Perls has shown that bile has the power of dissolving the red corpuscles, of depressing the temperature and cardiac action, and of paralysing the activity of nerve and muscle. Currier in the *Archives of Pædiatrics*, No. 53, draws a clear distinction between cases of icterus due to excess of hæmoglobin in the blood, those which are due to resorption of bile, and those which result from septic elements and conditions. He considers that to speak with Silbermann and Schmidt of any fermentation process occurring in the blood in cases of non-septic icterus is incorrect.

TESTIMONIAL TO DR. GEORGE JOHNSON.

NUMEROUS friends and former pupils attended with the medical staff at King's College on June 14th, when, in the name of the subscribers, Sir Joseph Lister presented Dr. George Johnson with the testimonial portrait painted by Mr. Frank Holl, R.A. Professor Bentley, late Dean of the Medical Department, also presented a handsome volume containing the names of subscribers, and Sir William Bowman spoke briefly on behalf of the College Council. Dr. Johnson, in reply, gave an interesting summary of his career from its commencement. He made graceful allusion to the help and encouragement he had received from Dr. Robert Bentley Todd, and later from Sir Thomas Watson; he also spoke of his work in connexion with kidney disease, and of the discussion which was roused by his theory of collapse and his treatment of cholera. The portrait at first sight, perhaps, is a little disappointing, but it grows upon those who are familiar with Dr. Johnson's face in thoughtful repose.

ST. THOMAS'S HOSPITAL.

THE distribution of prizes to the students of St. Thomas's Hospital will take place in the Governors' Hall, on Thursday, July 5th, by Professor George G. Stokes, D.C.L., LL.D., D.Sc., M.P., President of the Royal Society. Mr. Nettleship has been appointed Dean of the Medical School, in the place of Dr. Ord, who has so well filled this post for the past ten years, and to whose ability and unsparing energy much of the great success of this school is due.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Prof. Ernst Pfitzer, of Heidelberg, is proposed as the new Director of the Botanic Gardens, in succession to Prof. Eichler.

Buda Pesth.—Prof. Franz Varga has been appointed Director of the Veterinary Institute.

Greifswald.—Dr. F. Loeffler, staff surgeon and *privat docent* in the University of Berlin, has been appointed to the Professorship of Hygiene.

Jena.—For the Anatomical Chair there were proposed, in addition to Prof. Fürbringer of Amsterdam, Profs. Carl Bardleben of Jena and Stöhr of Würzburg, and also, but with a smaller number of votes, Profs. Born of Breslau, Ruge of Heidelberg, and Roux of Breslau.

Vienna.—Prof. J. Hyrtl has given six scholarships for medical students, open to those of all nations.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. Karl Kilcher, assistant in the Bohemian Laboratory of Pathological Anatomy, from blood poisoning, contracted during the pursuance of researches on the blood of typhus fever patients.—Dr. Franz Torday, *Docent* in children's diseases in Buda Pesth.—Dr. Josef Ossikovszki, Professor of Physiological and Pathological Chemistry in the University of Clausenburg.

A NEW serial issue of clinical lectures, similar to the well-known Volkmann's *Sammlung*, is announced from Berlin (Hirschwald). The publication will be called *Berliner Klinik*, and be edited by Drs. Hahn and Fürbringer. The first numbers will consist of lectures by Professor Senator—viz., one on Methods and Aims of Medical Work, and one on Icterus, its Origin and Treatment.

PROF. V. JAKSCH (cited in *Fortschritte der Medicin*, No. 12), from an examination of the blood in eighty-eight cases of disease has found that its alkalinity is diminished to a greater or less degree in fever, constantly in uræmia, in destructive disease of the liver, in leukæmia, pernicious anæmia, and chlorosis; also in poisoning by carbonic oxide.

SURGEON R. E. GENGE, of the Army Medical Department, who was stationed at Mooltan, while touring in the hill country of Serinuggur, was, we regret to learn, buried with six of his servants beneath an avalanche. The deceased officer was sent to India in 1886, and had just before that date passed from Westminster Hospital to Netley.

THE annual dinner of the Fellows of the Royal College of Surgeons of England will take place at the Holborn Restaurant on Thursday, July 5th.

A MEETING of the Anatomical Society of Great Britain and Ireland takes place at Cambridge to-day (Saturday).

REPORT OF THE LANCET
Special Sanitary Commission
ON THE
SWEATING SYSTEM IN EDINBURGH.

IT is generally supposed that Jews have never been able to get a good footing in Scotland. The Scotch, it is urged, are "too cannie." Undoubtedly there is some force in this argument; but, nevertheless, Jews, and even Polish Jews, have of recent years found their way north of the Tweed. In Edinburgh there are a few, and in Glasgow they are very numerous. Edinburgh is an important centre, not for sweating, but for the higher branches of the tailoring trade. The orders received for clothes by the Edinburgh tailors are altogether out of proportion with the size of the town. From the provinces, from all parts of Scotland, and even from the colonies, people come to Edinburgh to order clothes. For elegance of fit and excellence of material the Edinburgh tailors have acquired a world-wide reputation. This is particularly the case with regard to the clothes and robes worn by the clergy, and orders for suits are constantly received in Edinburgh from the United States, from Canada, and from Australia. The condition of the tailoring trade in Edinburgh is therefore a matter of more than local interest. Until lately, however, little or no attention was paid to the sanitary aspect of the case, and some of the best shops allow their work to be done under the worst conditions. These high-class master tailors are responsible, also, for the introduction of a number of foreign workmen, whose disregard and ignorance of sanitary questions have increased the danger accompanying the making up of clothes.

A general lock-out in the tailoring trade of Edinburgh occurred in 1873. The cause of the dispute was never clearly stated, but the prevalent impression was that the masters wished to effect a reduction of wages. Agents were then sent to London and elsewhere, and a number of Jews, both German and Russian, were brought to Edinburgh. Some were single, and others came with their families. In many instances the master tailors found lodgings for these Jews, became security for the payment of the rent, and gave them work to do in their own homes. Previously to this strike the journeymen tailors at Edinburgh had never been seriously troubled by the competition of foreign workmen. There had been, it is true, a strike in 1866, and then a certain number of Danes were imported into Edinburgh, but these Danes worked in the workshops, and rarely at home. They fraternised with the Scotch tailors, joined their union, and thus ceased to compete against the native labour. The lock-out of 1873 was more serious. It lasted five months, and the dispute was never clearly settled. From a sanitary point of view, it resulted in firmly implanting Jew tailors in Edinburgh, and in greatly extending the home-work system.

The tailors working for the best shops in Edinburgh complained to us that they often suffered from total want of sanitary convenience, and that there was no efficient inspection. In one of the shops the tailors have to descend through a trap door, and when this is closed the only air and light that can be obtained comes from a narrow window some eighteen inches high that skirts the pavement of the street. This is therefore a cellar workshop. It is devoid of proper ventilation, yet young girls work here as well as men, and there is a coke stove to warm the pressing-irons, which further vitiates the atmosphere. In another workshop where, according to the measurement taken by the tailors themselves, there is only 180 cubic feet of space for each worker, and which is not high enough to enable the men to stand up, clothes are made for judges, barristers, &c. Many of the robes worn with so much state and dignity in the courts of justice are made in this ill-ventilated place, where a man of ordinary height cannot stand up straight. In another order shop, we were informed, there is no accommodation for either men or women. When the inspector calls, it is said that he is shown a closet adjoining the shop where the customers are received, but that the workpeople are not allowed access to this closet, and have therefore to resort to expedients not in keeping with the dignity and decency that should be observed by all classes. Complaints also were made to us concerning a large shop which kept a few months ago a number of women working till 9.45 in the evening. For this overtime no extra pay was given, but if the women were ten minutes late the following morning they were fined threepence. Overtime is allowed when notification is sent to the factory inspector. But the law should be modified in the sense that the employer should send his notification in advance; otherwise he may keep it by him. If the inspector calls while the work is proceeding, the employer shows that the notification was already drawn up and would have been sent. If the inspector does not call, then the notification is not sent, and thus overtime is worked oftener than allowed by the Act. Finally, when speaking of the high-class tailors, we might observe that while a great portion of the robes for the law courts are made in a gloomy cellar workshop, a still larger proportion of the ecclesiastical clothes are made in an ill-conditioned garret. Also some of the women employed in good order shops are allowed to take a part of their work home, where they continue toiling till 11 o'clock, thus breaking the spirit and object of the Factory Act, and exposing the clothes to the insalubrious surroundings of their overcrowded and poverty-stricken dwellings. On one occasion recently some women paid by the piece worked so hard during the night in the hope of increasing their slender earnings, that the employer, not realising at what sacrifice of sleep and health they had turned out so great an amount of work in so few days, concluded that he was paying them too much, and consequently he lowered their wages. Evidently women who work in factories or workshops should not be allowed to work also at home, as such home work renders the Factory Act a dead letter. Yet this is a very general practice in Edinburgh, both with regard to the order trade and the slop trade.

Concerning the latter, a great portion of the cheap clothes sold ready-made in the shops of Edinburgh are bought in Yorkshire and in London. Still there are, we were informed, some 300 women engaged on slop work, making eleven and thirteen shilling pairs of trousers, &c. So far, however, as the danger of infection is concerned, Edinburgh is better protected than many other towns, for here the compulsory notification of infectious diseases is enforced. On the other hand, as the medical men are called upon to inform the sanitary authority every time they come across a case of infectious disease, many

tailors and others refrain from seeking medical advice till driven to the last extremity. No compensation is allowed, and therefore a home worker has every reason to conceal the presence of infectious disease, and comparatively few cases where the tailoring trade would be affected have been notified to the authorities. This naturally implies that a great many cases have been concealed. In another manner, the authorities at Edinburgh have shown themselves solicitous of the public health when dealing with the question of clothing. In the recent contracts given for the making of police uniforms, it has been stipulated that the contractor should have the uniforms made up on his own premises. This is undoubtedly a first step in the right direction. Public bodies should set a good example when they become purchasers or employers of labour. A little while ago the English contractor for police uniforms gave over some great coats to a Jew sweater. Sometimes the uniforms pass through several hands—the tailor who obtains the contract from the municipality, then a Jew cutter, then a Jew sweater, and finally they come back to the original contractor. Now these peregrinations are supposed to have been abolished. The contractor must himself make the clothes, and this on his own premises. The municipality, however, has a further duty to perform. We have seen some of the premises where these uniforms are made, and cannot consider them satisfactory. Not only must the clothes be made upon the contractor's premises, but these must be in every way suitable for the purpose. Nor is this all. The municipality has the right to insist that the workers shall not be allowed to work more than the time stipulated by the Factory Act, shall not take any of the work to their private homes, and shall at least receive what might be considered as a humane rate of wages. The manufacture of uniforms for those who guard the peace and safety of the country has, on account of the low wages paid, too often resulted in driving the unfortunate workers to supplement their insufficient earnings by vice and crime. The public bodies might set a better example, and, even though the cost be somewhat increased, they should see that the contract they make does not give rise to the sweating system and the grinding of the face of the poor. In another direction public bodies and large companies, such as tramway or railway companies, might render great service by showing greater forethought in timing the orders they give. There are certain periods of the year when tailors have little or nothing to do. Their days are passed in listlessly loitering at the corners of the street, and those among them who become drunkards generally contract this vice during these long, dull seasons. Could not the municipalities, the tramway companies, &c., give their orders for new uniforms precisely in this dull season, instead of, as at present, sending them in just at the time when tailors are most busy with other work? This would involve no extra cost; if anything, it might be a means of getting the clothes made at a cheaper rate, and a great moral and material good could thus easily be achieved.

There are manifest signs of alarm among the master tailors of Edinburgh. Within the last few weeks several order shops have effected improvements in their workshops, and the first Jew sweater on whom we called had entirely removed work from his private house. Joining with two other tailors, they all three now work on extensive premises and away from their private dwellings. Another Jew sweater, who has made a good many uniforms for the police, and on whom we next called, still continues to make clothes in his private apartment. We found three young women, apparently English, working with him. The closet of this house had a small window opening on to the stairs, which, however, had to be closed, as it was on so low a level that people could see through when opened.

Our third visit was to a Jew sweater of the traditional type. He had, as usual, just removed, and this from a most dilapidated house to another better dwelling, in which, however, he only occupied the shop and cellar. The shop was a miserable place, the front door could hardly be shut, and the bottom was eaten away by rats. Behind the shop, in a dark closet or lumber-room, he proposed to put a bed. Below, right under the level of the street, was the cellar workshop, the light and ventilation of course altogether insufficient. In the farthest and darkest extremity was a watercloset, ventilating into the workshop, and when the door is shut absolutely devoid of light or air. It is difficult to explain why the closet should be placed in the most unsuitable corner of the entire building. This sweater has sometimes obtained sub-contracts for making uniforms for the municipality.

We then proceeded to a house in another and newer district, where, according to the information kindly supplied us by the medical officer of health, Dr. Littlejohn, there had been a case of enteric fever. On the ground floor a corner room was converted into a workshop. Windows on both sides gave a flood of light. Three men and two girls were at work. The floor was dirty, and the boards broken. The place was very hot, and a strong smell of sewage prevailed. We soon found that a four-inch iron drain pipe came from the ceiling above, and passed down the side of the wall within the workshop. In consequence, probably, of the heat of the workshop or the material with which the pipe was made, it gave off from its entire surface a strong smell of drainage. It seemed as if the pipe was porous. Certainly it should have been placed outside and not inside the wall, and made of better material. The sweater and all his workpeople complained bitterly of this pipe. The man, his wife, and children lived on the first floor, and we visited his private apartment. It was large, airy, and very clean, but the closet had been neglected. Upstairs there was a Scotch family, which presented a typical contrast to that of the Jew. Their closet was kept in admirable order and perfectly clean; on the other hand, their rooms and their bedding were dirty and untidy. They were not tailors but dressmakers. They were greatly disturbed by their Jew neighbours, who worked through all Sunday and made much noise. Nor were the Jews slow in finding fault with the Scotch; but, to our mind, each had their good and their weak points. The Scotch women were making dresses on their kitchen table, and they also slept in the kitchen. Altogether, what with bad sanitation, poverty, and dirt, our opinion as to the risk attending the making of clothes was only confirmed by this experience. We also visited another Scotch dressmaker, and found some of the dresses lying on her bed. She told us how she had been engaged as a workwoman by several of the best dressmakers in Edinburgh, and complained bitterly of want of air and sanitary accommodation in some of the workshops. Now she is working on her own account, and with only her mother to assist her. She therefore imagined that no one had any right to exercise any sort of control over the sanitary condition of the place—the private home where she made the dresses. This person and many others have still to be taught that the object in view is not merely to protect the health of persons who make clothes, but also the clothes themselves, so that garments that others have to wear shall not come in contact with dirt or the germs of disease.

REPORT ON THE RECENT CONDITION OF HIS MAJESTY THE LATE EMPEROR OF GERMANY.

WE have received from Sir Morell Mackenzie the following report:—

A few days before the Emperor left Charlottenburg he began to lose ground, a tendency which continued to show itself after His Majesty arrived at Potsdam. There was, however, nothing alarming in the symptoms until the early morning of June 8th, when Professor Krause (who, in the absence of Mr. Hovell, was sitting up with the Emperor) observed that in drinking milk some of it passed down the trachea into the lungs, producing violent coughing, whilst some came directly out through the tracheal wound. During the day His Majesty was able to swallow solids moderately well, but in taking liquids the greater part was lost in the way already described. It was generally agreed that a fistula had taken place, but Sir Morell Mackenzie suggested the possibility that the liquid might pass directly into the larynx through the epiglottis not acting properly.[1] He however agreed with his colleagues that in all probability ulceration had taken place through the posterior surface of the larynx into the œsophagus. On the evening of the 9th, in the presence of Professors Bardeleben, Leyden, and Krause, and General Arzt von Wegner, Sir Morell Mackenzie inserted a tampon cannula, which was immediately inflated. After this no

[1] This suggestion eventually proved to be correct.

fluid passed down the trachea, but in drinking nearly all the liquid taken still passed into the larynx and escaped by the side of the cannula. On the 10th the condition remained unchanged, and on the following morning it was unanimously agreed that Sir Morell Mackenzie should attempt to feed with an œsophageal tube. A tendency of the posterior wall of the trachea to bulge forwards, and thus obstruct the lower orifice of the cannula, having been lately noticed, it was believed that this structure was very soft, and it was thought that a false passage could be easily made. Hence it was considered that the passing of an œsophageal tube would not be unattended with danger.[2] However, this succeeded perfectly well, and from Monday, June 11th, till Friday, June 15th, at 6.30 A.M., His Majesty was regularly fed with condensed milk, cream, beef-tea, eggs, and whisky. On Tuesday, in the middle of the day, it was noticed that the Emperor's breathing became obstructed, and this gradually increased, so that at 7 P.M. it became serious. It had been arranged in the morning that in the evening a longer tube, which had been prepared a day or two previously, should be inserted, and Sir Morell Mackenzie intended waiting till 10 P.M., in order that he might introduce it in the presence of Professor Bardeleben, who was expected at that hour. At 9 P.M., however, the breathing became so bad that Sir Morell Mackenzie found it necessary to take immediate steps without waiting for the Professor. Before changing the tube Sir Morell Mackenzie determined to try if he could alter the position of the cannula after inserting a pilot through the tube. The attempt was perfectly successful. On inserting the pilot it was discovered that the posterior wall of the trachea projected against the lower end of the cannula, and partially covered the orifice. By tilting the cannula forwards Sir Morell Mackenzie succeeded in releasing the lower end of the tube from the projecting surface of the trachea, and the breathing at once became perfectly easy. The pulse became very quick, and the breathing rapid, and on the night of Wednesday, June 13th, it was evident that pneumonia had set in. The temperature on that evening was 103°, whilst on the two or three previous nights it had varied between 101° and 102°. From this date it was only a question of struggling on for a day or two, and at a quarter-past eleven on Friday morning the illustrious patient passed away. During his long and tedious illness, in which the prospect of recovery was repeatedly darkened by sudden relapses, no word of complaint ever passed his lips, no sign of impatience was ever seen. His medical attendants and faithful servants will always cherish the recollection of his grateful acknowledgment of services which ordinary patients exact as a right.

The following is the text of the report drawn up by Sir Morell Mackenzie at the request of the Emperor, and which, with the *procès verbal* of the post-mortem examination, is to be deposited in the State Archives:—

"In my opinion the disease from which the Emperor Frederick III. died was cancer. The morbid process probably commenced in the deeper tissues, and the cartilaginous structure of the larynx became affected at a very early date. A small growth which was present when I first examined the late Emperor was removed by me by several intra-laryngeal operations, and although all the portions taken away were submitted to Professor Virchow, he was unable to detect in them any evidence of the existence of cancer. Examinations of the sputa made at the beginning of March by Professor Waldeyer, however, led that pathologist to believe that cancer was then present. Whether the disease was originally cancrous, or assumed a malignant character some months after its first appearance, it is impossible to state. The fact that perichondritis and caries of the cartilages played an active and important part in the development of the disease no doubt largely contributed to make it impossible to form a decided opinion as to its nature till quite a recent date.—(Signed) MORELL MACKENZIE."

[2] This supposed soft condition of the walls was not found after death, and it is probable that the bulging of the posterior wall was due to the destruction of the cricoid cartilage and the upper rings of the trachea, in consequence of which the posterior wall of the windpipe was no longer properly supported.

MEDICAL MAGISTRATE.—Mr. Lawrence Newman Walker, L.F.P.S. Glas., L.S.A. Lond., Government Railway Surgeon, Alicedale, Cape of Good Hope, has been appointed by the Cape Government a Justice of the Peace for the district of Albany, Eastern Province, South Africa.

THE EIGHTH CENTENARY OF THE UNIVERSITY OF BOLOGNA.

(From our Rome Correspondent.)

Bologna, June 11th.

THE King and Queen of Italy arrived this morning, and from the station, where a brilliant assemblage, civic and and academic, received them, *en route* to the Palace, amid an enthusiastically-applauding crowd, their progress was quite triumphal. The railway terminus for days past has been the scene of picturesque demonstrations, as the students of Bologna in academic costume welcomed those of the other universities, Italian and foreign, on their alighting from the train. Some of the costumes are singularly striking, not least those of the German *Burschenschaft*, whose swords, which they unsheath and brandish on occasion, are not quite in harmony with the precept, "*cedant arma togæ.*" Nothing, however, can exceed the sentiments of brotherhood that animate the youths of so many diverse nationalities, in proof of which I may mention that when the French students arrived at the station they were at once taken possession of by the Germans, who mounted the same cabs with them, while from these the horses were detached by the Italians, who drew their transalpine *confrères* through the streets amid the enthusiastic cheering of the populace. All the places of public resort—the piazzas, the porticoes, the *cafés*—are quite gay with undergraduates in the most variegated, parti-coloured costumes, often walking arm-in-arm—a spectacle which, in the case of French and German students, seems specially to delight the others.

Yesterday witnessed the reception of the foreign students in the *cortile* or courtyard of the University, and a brilliant sight it was, the Edinburgh contingent, with gown and square cap, coming in for repeated rounds of applause. Berlin, Leipsic, Heidelberg, Strasburg, Halle, and other German seats of learning were characteristically represented—most of the students showing the scars of duels,—and were also heartily cheered, as was each successive contingent as it filed in. The president of the students' committee, Signor Pietri, delivered a really admirable speech of welcome, in which he dwelt on the significance of the fact that Italy, the youngest exemplar of national unity, was now, in the commemoration of the octocentenary of Europe's oldest university, foreshadowing the unity of races. The delegates of the different nations responded, some in French, the German orator from Leipsic in excellent Italian, until the hour for refreshment saw the whole assemblage seated at a sumptuous repast. At 3 o'clock there was a reception in the Brunetti theatre, under the presidency of Signor Panzacchi, whose brilliant harangue teemed with gratifying allusions to the great leaders of science and literature in England, France, Germany, and Italy, to the obvious delight of his young audience.

Magnificent weather favours the festivities, and as I write a steady stream of the representatives of all the various academic bodies, societies, and institutes of the world is setting towards the Archiginnasio, where they will be presented to the Syndic of Bologna. The importance of the proceedings rises *crescendo* till the 14th, when special honours will be paid to Luigi Galvani, in the Piazza Galvani, with a discourse from Albertoni and the distribution of commemorative medals in the anatomical theatre of the Archiginnasio. Later on that day the students will meet to hold a solemn farewell, of all which demonstrations I will give some account in my next letter.

Bologna, June 16th.

We are in the ground-swell that succeeds such gales of festivity as that which has just swept over Bologna, but even calmer moments could not modify the force of the universally shared conviction that of all the contributors to the success of the commemoration the students bear away the palm. Even in the direction where young heads are confessedly inferior to old the advantage rests with the youths. In the accommodation of guests—an elementary provision, one would have thought, in the arrangements for the comfort of so vast an influx of strangers—the students far outshone their grave and reverend seniors; and while many a scientific or literary grandee, arriving after a long and weary journey, had to court tired nature's sweet restorer in dormitories to which the tub of Diogenes was palatial, the young bloods from the sister seats of learning, to whom days and nights of travel were less of a labour

than a "lark," were, from their alighting at the terminus to their installation in snug airy quarters, awaited on with a forethought which only patriarchal years could justly claim. The credit for this hospitable care is chiefly due to a young graduate in engineering, Guiseppe Pietri by name, a native of the island of Sardinia, who has lately closed a brilliant academic career at Rome, Parma, and Bologna, in which he showed such judgment, tact, and organising power that the post of president of the students' committee fell to him by universal suffrage. Amid all the gaiety with which the Bologna *Burschenschaft* entertained their guests, there was never an approach to the rowdyism born of excess, although refreshments were always forthcoming on the liberal scale of youth; although Bacchus bestriding the huge wine-butt from Turin, drawn by dignified buffaloes, formed a suggestive figure in the first day's procession; and although the Latin rhymes emblazoned on the *botte* were certainly inspired by no ascetic:—

Ave, color vini clari,
Ave, sapor sine pari,
Tuâ nos inebriari
Digneris potentiâ.
Primum gotum, bibe totum,
Ad secundum vide fundum,
Tertium erit sicut primum,
Et sic semper bibe vinum.
Bibitores, exultemus
Vinum bonum quod habemus,
Adaquantes condemnemus
Ad æternam tristitiam.

On the 12th, when the celebration of Bologna's octocentenary was solemnised with every circumstance of pomp and pageant in the quadrangle of the Archiginnasio, the students, undemoralised by the festivities of the previous three days, formed a picturesque foil to the rather sombre gravity of their academic seniors; and the Bolognese *Burschenschaft*, with their caps of the period of Galvani—blue in colour for law, white for literature, green for mathematics and physics, red for medicine and pharmacy,—with the other Italian and the foreign *studentesca* in every imaginable variety of costume, seemed to reflect from below the bright tints and happy faces of the groups of ladies who leant from the tiers of balconies above.

The order of proceedings given in my first letter was rigidly carried out. The academic *cortège* from the new university to the old (or Archiginnasio) was, by universal admission, perhaps the stateliest and most impressive yet recorded; and when the spacious quadrangle was duly filled with its many-coloured, various-vested audience, the King and Queen, shortly after 10 A.M., crowned the ceremonial by occupying their thrones amid the strains of the Royal march and the deafening plaudits of the assembly. Then followed a freshly conceived and finely versified ode by Panzacchi set to fitting music by the Maestro Franchetti, and, after a short introductory discourse by the Rector Cappellini, and a lengthier and more effective one by the Minister of Public Instruction (Boselli), the poet-professor Giosnè Carducci appeared at the crimson-velvet-covered tribune erected for him a little to the left of the thrones. When the thunders of applause that greeted him had subsided, he delivered the discourse of the occasion, of which I will only say that, though the expectations formed of it were high, though it had been for months in preparation, and was known to have taxed the powers of one of the greatest living poets, it far outsoared the standard already fixed for it by the audience. One passage I cannot withhold, conscious as I am that my translation does no justice to the exquisite poise of the periods and the liquid harmonies of a writer with whom expression in his native Italian is one of the fine arts. Having shown that Bologna appeared opportunely in the grey dawn of modern civilisation to focalise and fan the flame of liberty in thought and research, which burst forth with new life from the submerged Roman Empire, he referred to the genius of the university system she inaugurated: "Its constitution was democratic. The ardour of freedom which glowed in the Italian city had radiated up and around to the transalpine peoples. Those Franks, those Germans, those Bohemians, and Poles that flocked to Bologna from their baronial fastnesses, from their lordly abbeys and minsters, learned to acknowledge civil institutions, felt the advantages of living lives in common, yearned for equality. After strange journeys, over sea, from across the Alps, the earnest students of all Europe assembling here found again, in the 'nations' of which the universities were composed, their respective fatherlands; in the university each had his 'state'; in the common use of the Latin tongue they aspired to that higher unity, that civil brotherhood of the peoples for well-being, which Rome prepared by her law, which the Gospel preached through the spirit, which modern civilisation seeks to consumate by the reason. Oh Italy, oh my country! in the throes of servitude it was a pleasure to think of thyself as again about to launch from the Seven Hills the flight of the victor eagles over all the nations; but peradventure those were more humanely beautiful here in Bologna when to those self-same nations that had oppressed thee, thou, in resurrection, disclosed with the language of the ancient empire the fountains of the new civilisation, and, liberating them from the yoke of barbarism, convinced them of the glory of re-making themselves Roman."

The addresses of the foreign professors came next, the series being led off by the Rector of the University of Vienna, who was cordially cheered, as indeed were all impartially, though Professor Hoffmann of Berlin came in, perhaps, for the loudest and longest plaudits. The British professors had an admirable spokesman in Professor Jebb of Glasgow, whom the more scholarly of the assembly, Italian and foreign, were all curious to see as the author of the beautiful Pindaric ode, in which the most northerly of Bologna's academic children pays duteous homage to the mother school. The classical honours of the celebration, indeed, fell by unanimous consent to the Scottish professor, whose Latin speech was in its way as finished a performance as the Greek strophés, antistrophés, and "after-songs," in which he emulates the noblest flights of the "Theban Eagle." Switzerland, too, was worthily represented by Professor Carl Vogt of Geneva; and after the American delegates had concluded their loudly applauded speeches in recognition of the debt of the New World to the Old, the Italian ex-minister Pessina spoke for the sister universities of Italy, and Professor Gandino of Bologna wound up the ceremony of the day in a beautifully clear and classical oration in the Latinity of which he is a master.

On the 13th the great features were the discourses of Ceneri, Saffi, and Bovio; the latter two enthusiastically democratic in their tenour, and fully appreciated by the young minds to which they especially appealed. In the evening the students held their *festa umoristica* in the Montagnola Gardens, and carried their innocent dissipations far on into the night. But on the following day (14th) they had more serious business in hand—the commemoration of Galvani in the Archiginnasio. The assemblage was nearly as brilliant as on the 12th, and the discourse of Professor Albertoni was in all respects worthy of the occasion. He showed that in celebrating the centenary of Galvani contemporaneously with the octocentenary of the Bolognese School the *genius loci* was well inspired. In modern times no son of Bologna has done her more honour than the "discoverer of the vital force," the demonstrator that the "cerebrum is the seat of intelligence." He reviewed in detail the experiments which led Galvani to his mighty generalisation; he dwelt on his other labours; he wove the various threads of the discoverer's life into that harmonious *ensemble* which made it a model of all the virtues. He then proceeded to illustrate how Galvani's compatriots, even co-regionaries, Nobili and Matteucci, had laid the foundations of electro-therapeutics, and pointed out the difficulties amid which Italy, in her struggles for unity and independence, had prosecuted physiological research. A bright future, however, was before her. Having indicated the problems yet to be solved in biology, he augured for the rapidly developing Italian schools an honourable share in their not distant solution. After a most interesting homily, Professor Albertoni assisted at the presenting of commemoration medals and other gifts to the Italian and foreign delegates; and then the committee, accompanied by an enthusiastic throng of students of all nationalities, proceeded to lay laurel crowns of bronze on the statue, on the façade of the house, and on the tomb of Luigi Galvani. This was the last remarkable act of the celebration of Bologna's eighth centenary, and though there have been shortcomings in its programme—though, for example, it would have been more in keeping with a great medical school like that of Malpighi and Morgagni to have extended the bestowal of honours to Anglo-Saxon surgeons and physicians, deserving recipients as were Sir Spencer Wells and Dr. Weir Mitchell,—yet, on the whole, and the magnitude of the celebration being duly considered, its organising committee must be congratulated on a magnificent and epoch-making success.

STATISTICS OF THE LONDON HOSPITALS.

SEVERAL correspondents have addressed us on the subject of the statistics of the London hospitals, published in our Supplements of the last two issues. The figures there given were in many respects so new that they could not fail of awakening a considerable amount of interest, but it would seem also that they have by some of our correspondents been a little misunderstood. Thus, for example, Mr. Nelson Hardy, in a long letter, which we regret not having space to publish in this number, impeaches our summary statement on p. 1177, which gives the number of patients relieved in the year under discussion as 1,067,202, and the total cost as £546,733. He writes: "Now I propose to show, without going beyond the last two numbers of THE LANCET for my authority, that very grave doubts exist in the minds of well-informed writers as to the accuracy of these statistics." He then quotes, in refutation of the number of patients, from our leader of the previous week, a remark to the effect that "we have often shown reason for suspecting the accuracy of this famous and much-used million." These two propositions, though apparently contradictory, are in truth easily reconcilable. For the simple fact is that the word "patients" is used in two distinct senses. Hospital authorities attach a conventional meaning to the word, which for their purposes, and therefore for the purposes of our summary, which only collected and reproduced the hospital reports, is legitimate enough. A "patient," in their sense, is a person who receives relief not exceeding a certain maximum amount. If the same person, having received this quantum of relief, continues under treatment, he is entered as a second patient, and thus one and the same individual may figure in the report of one institution as two, three, or even several "patients." Then, again, the same person not infrequently seeks relief at more than one institution, and in that way figures in more than one report, and enters more than once into our summary. No one can complain of this. *As a measure of the amount of relief afforded* the figure is the best that could be given. It is much more true to fact than would be an analysed statement giving only the number of different individuals brought under treatment, because it assimilates the actual cases more nearly to the average case than if the most prolonged illness and the most continuous attention counted only for the same as a single visit. But a very mistaken inference has sometimes been drawn from these figures. Thus, it has been said that London contains roundly four millions of inhabitants; that one million applicants receive hospital relief in the course of a year; therefore that one Londoner in four is dependent upon these institutions. Now, by the light of what has been already said, it will be seen that this is an entire misuse of the figures. The conclusion would be justified if every patient were a distinct person; but since that is not so, it is clear that the figure employed greatly overstates the indigence of the metropolis. Londoners are neither so poverty-stricken nor so demoralised as this would imply, and it is in that sense that we have disputed the figure. We are glad to have the opportunity of pointing out this important distinction, for it is in our view highly necessary that the public should be taken fully into the confidence of the hospital authorities. Exaggerations recoil on those who propound them; they give rise to indifference on the part of the public, even to legitimate demands; and, what is still worse, they afford some kind and colour of justification for that indifference. The London public is, in our judgment, only insufficiently alive to the requirements of the hospitals of the metropolis; but in attempting to bring them home to the public conscience, the error chiefly to be guarded against is assuredly that of exaggeration.

What we have just said applies with quite as much force to the financial as to the numerical statement. It has come to be the fashion to speak of the annual deficiency upon the London Hospital accounts as amounting to £100,000 Our financial summary brings out a much more modest and, we will venture to add, a much more accurate figure. The difference is easily explained. Our statement includes legacies among the sources of income, as a footnote shows (although it would seem from correspondence that has reached us that we have not in every case been furnished with figures in respect of this item). But it is very customary with hospital officials to omit this item, on the ground that it should be treated as capital rather than as revenue. There is much to be said for this view, provided the practice of the institution agrees with the theory; although we think that the better course is to enter the item on both sides of the account, and exhibit it as special income on the one side and special outlay on the other. But, on the other hand, if incoming capital is to be distinguished from ordinary income, capital outlay should in like manner be distinguished from ordinary expenditure. But this is by no means the invariable course, and thus in many instances an income denuded of its legacies is balanced against an expenditure swollen by cost of buildings and other operations which result in assets. It is in this way that what we are bound to consider the exaggerated estimate of £100,000 as the annual deficiency is arrived at, and we are satisfied that sober people will be more disposed to entrust the administration of their charity to almoners who render a strict and accurate account than to such as year by year put forward the wholly inaccurate and plainly incredible story of a deficit growing by annual increments of £100,000. If the hospital managers of London were going thus recklessly year after year beyond their means, we should be the first to proclaim a crusade upon them. But it is not so. It will be found, on reference to our tabulated statement, that the "extra expenditure"—that is, expenditure for the most part represented by assets—amounted last year to not less than £50,000; and when this is compared with the deficiency of revenue (£45,000) it will be seen that these aggregate figures give no occasion for complaint against the hospitals on the score of improvidence; on the contrary, they will probably produce an illusory sense of satisfaction; and it will, therefore, be proper to add that the actual deficiency would be much greater than it is if many, perhaps even most, of the hospitals were not working greatly below their capacity. The comparison of total beds with beds occupied illustrates this, and here is to be seen the true effect of hospital starvation.

HEALTH REPORT OF INDIA, 1887.

No. II.

THE average number of prisoners confined in the gaols throughout India during 1886 was 84,910; the admissions into hospital were in the ratio of 1014, the deaths of 31·85, and the daily sick of 35·7 per 1000. The admissions and mean sick corresponded exactly with the results for the preceding year, and the death-rate showed a decrease of 1·79 per 1000. The sickness and mortality were greater in Bengal than in either of the other two Presidencies; the admissions were lowest in Bombay, amounting only to 582 per 1000, and the deaths in Madras were only 17·53, or little more than half, the ratio in Bengal. The death-rate in Bengal, however, was lower than in any of the thirteen preceding years, except 1877, when it was 31·88 per 1000. Dysentery and diarrhœa were the most fatal diseases, and caused rather more than one-third of all the deaths. There were only 8 cases of enteric fever in the gaols of Bengal, and of these 6 died; and there were 28 of cerebro-spinal fever, with 19 deaths. Cholera was the cause of 142 admissions and 89 deaths, being respectively in the proportion of 2·8 and 1·78 per 1000 prisoners. The highest death-rate of any prison was that of Sambalpur, where, in an average of 179 prisoners, it amounted to 145 per 1000, of which 61 per 1000 were by cholera; at Sialkot, Shahpur, Bijnor and Basti no death occurred during the year. In the Madras Presidency, omitting gaols with a population under 100, the highest death-rate was at Cannanore, amounting to 44·23, and the lowest 3·97 per 1000 at Madura, but in the Rajamundry District gaol, in an average of 108 prisoners, no death occurred. Dysentery and diarrhœa were the most fatal of the diseases, giving a ratio of 4·64 deaths per 1000, or a little over one-fourth of the whole; and next in frequency were anæmia and debility. In Lower Burmah the deaths ranged between 16·84 at Thayetmyo and 140·7 at Shwegyin; at

Maubin there was no death in 148 prisoners. In the Bombay Presidency the lowest death-rate was 3·92 in Bombay common gaol, and the highest 64·91 in the Nara gang. As in Madras, they were free from cholera during the year. Respiratory diseases were the most fatal, but very slightly in excess of dysentery and diarrhœa. There was a considerable increase in the sickness and mortality of the prisoners in the Andaman Convict Settlement. In an average of 11,903, the admissions were 1658, the deaths 20·33, and the daily sick 57·0 per 1000. Dysentery and diarrhœa, phthisis, and respiratory diseases were the most frequent causes of death, and gave rise to one-half of the mortality. There were no cases of cholera of enteric fever in the settlement.

The summary of the sanitary sheets received from the gaols shows that a constant supervision is exercised, and that considerable improvement has been effected in their condition. But there are still many complaints of overcrowding, defective ventilation, insufficient drainage, inadequate water supply, and, in some instances, want of sufficiently warm clothing in cold weather. All of these are important factors and deserve careful attention. We trust that the needed improvements will not be lost sight of, but that, from year to year, we may have evidence of the practical value of remedying defects, as shown by progressively diminishing sick and death rates.

The vital statistics of the civil population of India are so imperfect that we consider it would be misleading to enter upon the question of the birth and death rates as shown in the returns given in this volume. So far as can be estimated from the deaths recorded throughout those parts of India where registration is effected, there was a very marked reduction in cholera compared with the preceding year. Assam was the only province in which the deaths by cholera were more numerous, and in it they exceeded those returned in every year of the preceding decennium, except 1884. In the Punjab and in Mysore it may be said to have been practically extinct, only twelve deaths having been reported in the former and ten in the latter during the year. In Assam, there were two periods of high mortality from cholera—April, May, and June, and again in November and December. "The brunt of the epidemic fell upon the districts of the Brahmaputra valley." The immigrant coolies, amounting to over 19,000, escaped the disease in a remarkable degree. The arrangements for the transit of the coolies appear to have been carried out in a very careful and satisfactory manner. In noting the great exemption from cholera in Bombay, the Sanitary Commissioner remarks that "the lessened prevalence of cholera during 1886 was certainly not due to any diminution of filth in and around the villages and towns in the Presidency, and the only way to account for it is by the supposition that the factor necessary for its development (probably atmospheric) was absent."

During the year there were 25,602 deaths reported as by snake-bite or killed by wild beasts; but it is probable this is much below the actual numbers.

The report on the civil sanitary works undertaken or in progress during the year shows that, while much has been done in some of the provinces, in others little has been undertaken, and "progress has been on the whole desultory and fitful. ..... The cause of much of the inaction displayed by local authorities on matters of sanitation has been due rather to want of funds and to the very inefficient means which have hitherto existed for giving effect to suggested improvements even of an obvious character." The Government has called the attention of the Local Government Boards to the urgent necessity for sanitary work on a well-considered plan being pursued persistently and systematically, and especially with reference to the provision of pure water, the improvement of drainage, and the adoption of an effective conservancy system.

It is noted that the health of the pilgrims who attended the Haj of 1886, was on the whole good, and that for the third consecutive year no cholera or other epidemic disease prevailed among them. This was probably due to the care taken to supply them with good water, which "was made available by the generosity of the Nawab of Rampur, who constructed a large reservoir, fed by a branch of the Zobeida aqueduct." Unusual care was taken to protect the water in the reservoirs from contamination.

A brief notice is given of such of the papers in the "Scientific Memoirs," issued contemporaneously with the Report, as have a pathological bearing.

HOSPITAL SUNDAY COLLECTIONS.

THE following is an additional list of amounts that have been received since the publication of our last issue on behalf of this Fund:—

St. John's, Notting-hill, £66 17*s.* 7*d.*; Mr. William Campbell, £20; St. Margaret's, Westminster, £218 8*s.* 6*d.*; Temple Church, £209 11*s.* 8*d.*; Chelsea Old Church, £26 1*s.*; St. Andrew's, Wells-street, £140 7*s.*; St. Mildred's, Lee, £35 17*s.* 1*d.*; St. James's, Clapham-park, £77 0*s.* 1*d.*; St. Paul's Knightsbridge, £372 7*s.* 7*d.*; St. Andrew's, Streatham, £33 3*s.* 1*d.*; St. Michael's, Blackheath-park, £65 17*s.* 3*d.*; Thames Ditton Parish Church, £21 19*s.* 3*d.*; St. Stephen's, Avenue-road, £35 18*s.* 1*d.*; St. John's, Redhill, £28 2*s.* 5*d.*; Holy Trinity, Stroud-green, £25 10*s.* 10*d.*; St. Nicholas', Chislehurst, £281 1*s.* 11*d.*; Chapel Royal, Savoy, £42 7*s.* 2*d.*; Dulwich College Chapel, £55; Willesden Presbyterian Church, £22; St. Thomas's, Clapton-common, £32 15*s.* 8*d.*; Marylebone Presbyterian Church, £60 11*s.*; Curzon Chapel, £50 15*s.*; South Hackney Parish Church, £23 11*s.* 10*d.*; St. Mary's, Kilburn, £89 4*s.* 8*d.*; All Saints', Norfolk-square, £57 11*s.* 5*d.*; St. Paul's, Great Portland-street, £50 6*s.* 8*d.*; Chapel Royal, Hampton Court Palace, £56 11*s.* 10*d.*; St. George's, Bickley, £60 5*s.* 2*d.*; St. James's, Hatcham, £34 7*s.* 6*d.*; St. Paul's, Clapham, £58 13*s.* 10*d.*; St. Jude's, East Brixton, £54 15*s.* 3*d.*; St. James's, Muswell-hill, £31 13*s.* 5*d.*; St. James's, Clapton, £26 13*s.* 3*d.*; St. Mary's, Barnes, £44 15*s.*; the Dutch Church, £29 19*s.* 2*d.*; St. Stephen's, South Dulwich, £160 8*s.*; St. Saviour's, Clapham, £25 3*s.*; Eaton-square Episcopal Chapel, £56 7*s.*; Holy Trinity, Islington, £26 13*s.* 7*d.*; Trinity Church, Hampstead, £86 15*s.* 2*d.*; St. James's, Norlands, £62 1*s.* 9*d.*; Portman Chapel, £185 14*s.*; St. Andrew's, Leytonstone, £26 8*s.*; St. Chrysostom's, Peckham, £21 4*s.*; box outside Mansion-house, £36 17*s.* 8*d.*; All Saints', Friern Barnet, £37 2*s.* 5*d.*; St. Michael's, Stockwell, £41; St. Matthew's, Upper Clapton, £61 2*s.* 5*d.*; Abney Congregational Church, Stoke Newington, £40 2*s.* 3*d.*; St. Mary's, Islington, £27 0*s.* 1*d.*; St. Dionis's, Fulham, £22 5*s.* 5*d.*; Christ Church, Brondesbury, £21 14*s.* 10*d.*; St. Barnabas', Addison-road, £152 1*s.* 7*d.*; Acton Parish Church, £27 1*s.* 8*d.*; St. Mary's, Graham-street, £34 8*s.* 5*d.*; Mr. H. A. Soames, £20; St. Paul's, Avenue-road, £114 6*s.* 10*d.*; St. Saviour's, Paddington, £113 8*s.* 10*d.*; St. Mary's, Bryanston-square, £104 10*s.* 5*d.*; Holy Trinity, Blackheath-hill, £47 3*s.*; Christ Church, Wanstead, £28 8*s.* 6*d.*; Greek Church, £98 14*s.*; St. Stephen's, Lambeth, £23 5*s.* 7*d.*; Holy Trinity, Sydenham, £169 7*s.* 6*d.*; Brockley-road Baptist Chapel, £33 2*s.* 6*d.*; Leyton Parish Church, £28 8*s.* 6*d.*; Magdalene Hospital Chapel, £27 10*s.*; Woodford Parish Church and Mission-room, £21 14*s.* 7*d.*; St. Mark's, Hamilton-terrace, £233 9*s.* 3*d.*; Berkeley Chapel, Mayfair, £100 11*s.* 4*d.*; Ascension Church, Balham, £78 8*s.*; Metropolitan Tabernacle, £150; St. Saviour's, Brixton-hill, £27 11*s.* 3*d.*; Holy Trinity, Woolwich, £35; Mitcham Parish Church, £40 3*s.* 10*d.*; St. Saviour's, Southwark, £31; Hayes Church, £31 16*s.* 1*d.*; St. James's, Kidbrook, £125 12*s.* 4*d.*; St. Bartholomew's and St. Matthew's, Sydenham, £120 12*s.* 4*d.*; St. John's, Penge, £75 17*s.* 5*d.*; Lyndhurst-road Chapel, £45; St. James's, Paddington, £186 15*s.* 1*d.*; St. Mary's, Highgate, £33 3*s.* 6*d.*; South-street Chapel, Greenwich, £30; Christ Church, East Greenwich, £44 11*s.* 10*d.*; Holy Trinity, Lee, £50 17*s.* 7*d.*; Bloomsbury Chapel and Mission-hall, £43 15*s.* 1*d.*; St. George's, Bloomsbury, £43 2*s.* 7*d.*; Christ Church, Hampstead, £112 18*s.* 8*d.*; All Saints', Ennismore-gardens, £459 0*s.* 8*d.*; St. Peter's, Vere-street, £258 3*s.* 9*d.*; Holy Trinity, Upper Chelsea, £148 13*s.* 5*d.*; Acton Parish Church, £37 1*s.* 8*d.*; Boys' Home, Regent's Park, £42 8*s.* 6*d.*; St. Paul's, Kilburn, £22 13*s.*; St. John's, Forest-hill, £65; St. Philip's, Regent-street, £21 6*s.* 1*d.*; Christ Church, Woburn-square, £31 1*s.* 8*d.*; Church of the Annunciation, Chislehurst, £70 10*s.* 6*d.*; All Saints', Clapham-park, £44 14*s.* 10*d.*; St. Matthew's, Canonbury, £21 6*s.* 4*d.*; St. Andrew's, Stockwell, £20 10*s.* 1*d.*; St. Saviour's, Chelsea, £84; Camden Church, Camberwell, and Schools, £86 6*s.* 1*d.*; St. Pancras Parish Church, £68 19*s.* 9*d.*; St. Mary's, Aldermary, &c., £84 12*s.* 6*d.*; Wimbledon Churches, £234 4*s.* 2*d.*; St. James's, Garlickhithe, £32 6*s.* 9*d.*; Sir W. B. Gurdon, £20; St. Margaret's, Lee, £78 7*s.* 10*d.*; Church of the Good Shepherd, Lee, £26 12*s.* 3*d.*; Holy Trinity, Roehampton, £70 0*s.* 3*d.*; St. Paul's, Greenwich, £30 17*s.* 6*d.*; Aldenham Parish Church, £37; St. Luke's, Redcliffe-square, £40; St. George's, Tufnell-park, £69 8*s.*; St. John the Evangelist's, Blackheath, £59 0*s.* 9*d.*; Kensington Congregational Chapel, £94 0*s.* 6*d.*; St. John the Divine,

Kennington, £49 5s. 7d.; Hare-court Chapel, Canonbury, £30 10s. 1d.; Central-hill Baptist Chapel, Upper Norwood, £27 11s. 2d.; Park Chapel, Camden-town, £40 11s. 10d.; Putney Parish Church, £25 5s.; St. John the Evangelist's, Putney, £38 4s. 6d.; New-court Chapel, Tollington-park, £45 11s.; Mr. George Palmer, £100; St. Paul's, South Wimbledon, £30; Blackheath Wesleyan Church, £27 5s. 11d.; All Saints', Putney, £37; Friends' Meeting-house, Reigate, £24 9s.; All Souls', Langham-place, £117 17s. 9d.; Christ Church, North Brixton, £65 5s. 3d.; St. Andrew's, Westminster, £65 4s. 11d.; Islington Presbyterian Church, £40; St. Peter's, Eaton-square, St. Peter's Chapel, and St. John's, Wilton-road, £599 11s. 6d.; St. James's, Holloway, £104 11s. 11d.; St. James's, Piccadilly, £100 4s.; St. Barnabas', Kensington, £152 1s. 7d.; St. Mary Magdalene's, Paddington, £60 7s. 6d.; St. Anne's, Highgate-rise, £28 17s. 8d.; Holy Trinity, Eltham, £51 4s. 2d.; St. Mark's, Tollington-park, £26 10s.; St. Mary's, West Kensington, £41 19s. 6d.; Hammersmith Parish Church, £33 18s. 6d.; St. Luke's, Nightingale-lane, £33 10s. 4d.; Camberwell-green (Congregational) Church, £22 3s.; Beckenham Parish Church, £40 18s. 5d.; St. Matthew's, Redhill, £26 13s.; Emmanuel Church, West Dulwich, £28 8s. 7d.; Holy Trinity, Tulse-hill, £67 10s.; Streatham Parish Church, £82 5s. 2d.; St. Michael and All Angels', Notting-hill, £44 0s. 6d.; St. Stephen's, Ealing, £57 2s. 7d.; St. Paul's, Old Charlton, £26 18s.; West Ham Parish Church, £29 0s. 7d.; Bayswater Wesleyan Chapel, £21 14s. 2d.; St. Luke's, Chelsea, £40 15s.; St. Thomas's, Portman-square, £96 12s. 2d.; Lock Hospital Chapel, £38 2s. 4d.; Christ Church, Lee-park, £41 0s. 2d.; St. Peter's, Dulwich-common, £40; Horbury Chapel, Notting-hill, £25 17s.; Heath-street Baptist Chapel, Hampstead, £50; St. Stephen's, Lewisham, £39 11s. 10d.; St. Mary Magdalene's, West Enfield, £25 8s. 7d.; Christ Church, Gipsy-hill, £89 10s. 2d.; Christ Church, Chelsea, £31 16s. 2d.; Regent's-park Baptist Chapel, £51 15s. 2d.; Catholic Apostolic Church, Gordon-square, £22 13s. 8d.; St. Luke's, Uxbridge-road, £23 10s. 5d.; St. James's, Fulham, £23 10s. 11d.; St. Augustine's, Queen's-gate, £131 6s. 6d.; St. Luke's, Nutford-place, £43 12s. 4d.; St. Andrew's, Holborn, £26 6s. 8d.; Rectory-place (Congregational) Church, Woolwich, £20 3s. 6d.; St. Marylebone Parish Church, £107 7s. 8d.; German Lutheran Church, Denmark-hill, £39 6s.; St. Thomas's, Regent-street, £57 6s. 4d.; Clapham Parish Church, £47 3s. 5d.; Willesden Parish Church, £34 4s. 2d.; Christ Church, Mayfair, £123 14s. 8d.; Brompton Parish Church, £460 3s. 10d.; Woodford Congregational Church, £35 6s.; St. Augustine's, South Kensington, £131 6s. 6d.; the Mall Unitarian Church, Kensington, £55 18s. 2d.; New College Congregational Chapel, Belsize-park, £27 9s. 9d.; St. Michael and All Angels', Paddington, £198 11s. 5d.; "F." (eighth donation), £50; St. Augustine's, Kilburn, £67 5s. 4d.; St. Paul's, Onslow-square, £341 15s. 3d.; Islington Chapel of Ease, £22 6s.; St. Dunstan's, East Acton, £27 13s. 6d.; St. James's, Marylebone, £68 10s. 3d.; Mr. W. Klein, £20; St. Gabriel's, Pimlico, £85 15s. 9d.; St. Augustine's, Highbury, £94 16s. 8d.; Quebec Chapel, £305 8s. 4d.; St. Peter's, Eaton-square, and St. Peter's Chapel, £505 10s.; St. John's, Wilton-road, £94 1s. 6d.; Holy Trinity, Paddington, £213 4s.; St. Paul's, Paddington, £29 2s. 1d.; West Hackney Parish Church, £61 16s. 1d.; St. Dominic's Priory, Haverstock-hill, £25 16s. 6d.; St. Michael's, Highgate, £50 15s. 5d.; St. Andrew's Presbyterian Church, West Norwood, £50; Emmanuel Church, Maida-hill, £30 5s.; All Saints', Kensington-park, £44 3s. 9d.; Hospital Chapel of Ease, Ilford, £20 13s. 1d.; All Saints', Finchley-road, £105; St. Giles'-in-the-Fields, £37 1s. 1d.; All Saints', Child's-hill, £26 3s. 4d.; All Saints', Margaret-street, £60 9s. 3d.; St. Andrew's, Stoke Newington, £26; St. John's, Deptford, £41 10s. 11d.; St. Mark's, Myddleton-square, £25 0s. 8d.; St. Saviour's, Highbury, £25 6s.; All Saints', Clapton, £24 13s. 3d.; St. Mary's Parish Church, Lewisham, £39 19s.; Carmelite Monastery, Kensington, £25; Society of Friends, Stoke Newington, £25 17s. 2d.; St. Mark's, Notting-hill, £38 16s. 7d.; Waltham Abbey Parish Church, £32 13s. 2d.; Clapton-park Congregational Chapel, £76 18s. 11d.; Rosslyn-hill Unitarian Chapel, Hampstead, £94 17s. 8d.; Holy Trinity, Anerley, £47 0s. 5d.; Belgrave Presbyterian Church, £33 0s. 4d.; Upper Holloway Baptist Chapel, £40 1s. 10d.; St. Mary's Parish Church, Newington, £27 2s. 2d.; Colet Chapel, St. Paul's School, and St. Paul's Preparatory School, West Kensington, £20 4s. 2d.; Christ Church, Beckenham, £42 8s. 2d.; St. John the Baptist, Kingston-vale, £30 12s. 11d.; Haverstock-hill Congregational Church, £26 12s.; Stepney Parish Church and Schools, £39 8s. 3d.; Clapham Congregational Church, £100; Hendon Parish Church, £45 13s. 6d.; St. Peter's, Cranley-gardens, £249 14s. 11d.; St. George's, Hanover-square, £145 15s. 8d.; St. Columba (Scotch Church), Pont-street, S.W., £108 10s.; Haverstock-hill Congregational Church, £26 12s.; Stamford-hill Congregational Church, £54 3s. 8d.; City Temple, £23 8s. 3d.; St. John Evangelist's, Clapham-rise, £77 12s. 9d.; St. Paul's, Herne-hill, £44 3s. 8d.; St. Lawence's, Jewry, £23 9s. 10d.; Islington Congregational Church, £100 9s.; Carshalton Parish Church, £33 7s. 6d.; St. Stephen's, South Kensington, £222 11s. 6d.; St. Stephen's, Clapham-park, £42 13s. 6d.; Montague Cookson Crackenthorpe, Esq., £50; Forest-hill Congregational Church, £27; Emmanuel Church, Forest-gate, £36 16s. 7d.; St. Peter's, Streatham, £55 15s. 1d.; St. Ann's, Soho, £48 9s. 6d.

We learn from Mr. Henry N. Custance, the secretary of the Fund, that last year "Dr. Wakley's legacy took up the sum total received by £1000; but, even taking this into account, the total on the number of days' receipts foreshadow an increase of something very close upon £1000 larger fund than in 1887." The amount received up to the time of our going to press exceeds £29,000.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5461 births and 2923 deaths were registered during the week ending June 16th. The annual rate of mortality in these towns, which had declined from 18·9 to 16·2 per 1000 in the preceding four weeks, was last week again 16·2. During the first eleven weeks of the current quarter the death-rate in these towns averaged 18·5 per 1000, and was 2·7 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 9·9 in Birkenhead, 10·3 in Derby, 10·7 in Leicester, and 12·1 in Plymouth. The rates in the other towns ranged upwards to 23·4 in Halifax, 23·7 in Preston, 24·6 in Newcastle-on-Tyne, and 27·9 in Manchester. The deaths referred to the principal zymotic diseases, which had declined from 330 to 265 in the preceding four weeks, further fell last week to 259; they included 89 from whooping-cough, 45 from diarrhœa, 38 from scarlet fever, 30 from measles, 25 from diphtheria, 19 from "fever" (principally enteric), and 13 from small-pox. The lowest death-rates from these zymotic diseases were recorded in Brighton and Sunderland, and the highest in Cardiff, Preston, and Manchester. The greatest mortality from whooping-cough occurred in Cardiff, Blackburn, and Manchester; from measles in Bradford; and from scarlet fever in Cardiff. The 25 deaths from diphtheria included 18 in London, 2 in Liverpool, and 2 in Manchester. Small-pox caused 6 deaths in Preston, 2 in Sheffield, 2 in Hull, 1 in Leeds, 1 in Manchester, and 1 in Bristol, but not one in London, or in any of the twenty-one other large provincial towns. No small-pox patients were under treatment either in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 904 at the end of last week, against 947 and 928 on the preceding two Saturdays; the 72 cases admitted to these hospitals during the week showed a decline of 30 from the number in the previous week. The deaths referred to diseases of the respiratory organs in London, which had been 237 and 185 in the preceding two weeks, rose again last week to 213, but were 24 below the corrected average. The causes of 63, or 2·2 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Wolverhampton, Bradford, Leeds, and in four other smaller towns; the largest proportions of uncertified deaths were registered in Hull, Liverpool, Brighton, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 20·9 to 18·5 per 1000 in the preceding three weeks, rose again to 20·0 in the week ending June 16th; this rate exceeded by 3·8 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged from 15·2 in Dundee

and 16·0 in Paisley, to 19·6 in Edinburgh and 23·9 in Glasgow. The 505 deaths in the eight towns showed an increase of 37 upon the number returned in the preceding week; they included 13 which were referred to measles, 9 to diarrhœa, 5 to scarlet fever, 5 to whooping-cough, 3 to "fever," 1 to diphtheria, and not one to small-pox. Thus, 36 deaths resulted from these principal zymotic diseases, against 52 and 44 in the preceding two weeks. These were equal to an annual rate of 1·4 per 1000, which corresponded with the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had declined from 13 to 6 in the preceding three weeks, rose again last week to 13, of which 12 occurred in Glasgow. The nine deaths attributed to diarrhœa were within one of the number recorded in the corresponding week of last year, and included 5 in Dundee. The fatal cases of scarlet fever, which had been 10, 9, and 3 in the previous three weeks, increased to 5 last week, of which 2 occurred in Edinburgh and 2 in Glasgow. The 5 deaths from whooping-cough and the 3 fatal cases of "fever" were all returned in Glasgow. The deaths referred to acute diseases of the respiratory organs, which had been 81 and 103 in the preceding two weeks, declined again last week to 94, but exceeded by 13 the number in the corresponding week of last year. The causes of 64, or nearly 13 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had declined in the preceding three weeks from 24·4 to 21·7 per 1000, rose again to 24·7 in the week ending June 16th. During the first eleven weeks of the current quarter the death-rate in the city averaged 24·9 per 1000, the mean rate during the same period being 17·3 in London and 19·7 in Edinburgh. The 167 deaths in Dublin showed an increase of 20 upon the number in the previous week; they included 5 which were referred to whooping-cough, 4 to scarlet fever, 3 to diarrhœa, 2 to "fever," and not one either to small-pox, measles, or diphtheria; in all, 14 deaths resulted from these principal zymotic diseases, against 20 and 19 in the preceding two weeks. The annual death-rate from these zymotic diseases was equal to 2·1 per 1000, the rate from the same diseases being 1·4 in London and 0·6 in Edinburgh. The fatal cases of whooping-cough, which had increased from 7 to 11 in the preceding three weeks, declined again to 5 last week. The 4 deaths from scarlet fever exceeded by one the number in the previous week; and the 2 fatal cases of "fever" showed a further decline from those returned in recent weeks. The deaths both of infants and of elderly persons showed a slight increase upon those recorded in the preceding week. Three inquest cases and 3 deaths from violence were registered; and 41, or nearly a quarter, of the deaths occurred in public institutions. The causes of 25, or 15 per cent., of the deaths in the city were not certified.

THE SERVICES.

WAR OFFICE.—Army Medical Staff: Surgeon Edward Arnold Cloete resigns his commission (dated June 20th, 1888).

ARMY MEDICAL RESERVE OF OFFICERS.—The undermentioned Officers to be Surgeons-Major, ranking as Lieutenant-Colonel (dated June 20th, 1888): Surgeon-Major William Malcolmson, 4th Battalion, the Royal Irish Fusiliers; Surgeon and Honorary Surgeon-Major Alex. Robertson Mackenzie, M.D., 1st Volunteer Battalion, the Seaforth Highlanders (Ross-shire Buffs, the Duke of Albany's); and Surgeon and Honorary Surgeon-Major Jas. Clark, M.D., F.R.C.S. Edinburgh, 2nd Volunteer Battalion, the South Staffordshire Regiment.—The undermentioned Officers to be Surgeons-Major, ranking as Majors (dated June 20th, 1888): Surgeon-Major Thos. Fredk. Greenwood, 4th Battalion, the Sherwood Foresters (Derbyshire Regiment); Surgeon Robert Ross Brown, 3rd Volunteer Battalion (Kent Brigade), Cinque Ports Division, Royal Artillery.—The undermentioned Officers to be Surgeons, ranking as Captains (dated June 20th, 1888): Surgeon and Honorary Surgeon-Major John Adam Watson, the London Division, Volunteer Medical Staff Corps; Acting Surgeon George Ritchie Gilruth, 1st Edinburgh City Artillery Volunteer Corps; Acting Surgeon James Scott Wilson, M.D., 2nd Volunteer Battalion, the South Staffordshire Regiment; and Acting Surgeon George Hogarth Turnbull, M.D., 1st Roxburgh and Selkirk (the Border) Rifle Volunteer Corps.

INDIA OFFICE.—The Queen has approved of the undermentioned Officers of the Staff Corps and Indian Military Forces being permitted to retire from the Service: Deputy Surgeon-General Thomas Gillham Hewlett, C.I.E., Bombay Medical Establishment (dated May 13th, 1888); Brigade Surgeon Alexander Garden, M.D., Bengal Medical Establishment (dated April 18th, 1888); and Brigade Surgeon James Edward Tierney Aitchison, M.D., C.I.E., Bengal Medical Establishment (dated May 14th, 1888).

ADMIRALTY.—The following appointments have been made:—Fleet Surgeon G. A. Campbell, to the *Northampton;* Fleet Surgeon W. A. Stewart, to the *Warspite;* Staff Surgeon R. S. P. Griffiths, to the *Rodney;* Surgeon C. J. Mansfield, to the *Northampton;* Surgeon G. A. Waters, to the *Warspite;* and Surgeon H. C. L. Earle, to the *Rodney.*

ROYAL NAVAL ARTILLERY VOLUNTEERS.—Clyde Brigade: David Cairns, M.D., to be Surgeon (dated June 12th, 1888). Liverpool Brigade: Edward Henry Beaman, M.R.C.S., L.S.A., and Richard Foster Owen, Esq., to be Honorary Surgeons (dated June 14th, 1888).

ARTILLERY VOLUNTEERS.—1st Durham: Surgeon G. Bolton is granted the honorary rank of Surgeon-Major (dated June 16th, 1888).—3rd Middlesex: Surgeon and Honorary Surgeon-Major R. Davy resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the corps on his retirement (dated June 16th, 1888).

RIFLE VOLUNTEERS.—3rd (the Blythswood) Volunteer Battalion, the Highland Light Infantry: Robert Pollok, M.B., to be Acting Surgeon (dated June 16th, 1888).—6th Volunteer Battalion, the King's (Liverpool Regiment): John William Ellis, Gent., to be Acting Surgeon (dated June 16th, 1888).—1st Volunteer Battalion, the Lincolnshire Regiment: George May Lowe, M.D., to be Acting Surgeon (dated June 16th, 1888).—4th Volunteer Battalion, the Norfolk Regiment: Charles Arthur Owen Owens, M.D., to be Surgeon (dated June 16th, 1888).—1st Volunteer Battalion, the Royal Warwickshire Regiment: Acting Surgeon Thomas Richards, M.B., to be Second Lieutenant (dated June 16th, 1888).

Correspondence.

"Audi alteram partem."

TREATMENT OF EARLY EXTRA-UTERINE GESTATION.

To the Editors of THE LANCET.

SIRS,—Were I able to accept Dr. Aveling's main proposition upon which his argument rests—viz., that an extra-uterine fœtus has been in forty-two cases killed by electricity,—I should follow him also in thinking lightly of the reasons which, in the paper which he has honoured by his able criticism, I have submitted against the electrical treatment. But I do not regard as conclusive the evidence that in forty-two cases the fœtus has been killed by electricity, and for the following reasons:—

1. I presume that the forty-two cases of which Dr. Aveling speaks are published cases. In some of the cases published as cures of extra-uterine pregnancy by electricity, it seems from the reports doubtful whether pregnancy was present at all; and in others, supposing pregnancy to have been present, the facts have pointed to rupture having taken place. I do not know of any case in which a diagnosis of tubal gestation has been made before rupture, and verified.

2. There is, I think, good reason for believing that extra-uterine gestation is more common than is generally supposed, and that it often ends in early rupture, followed by absorption of the fœtus and effused blood. It is possible, and I think probable, that (taking for granted the diagnosis) the cases supposed to have been cured by electricity may have been simply instances of spontaneous cure, which would have happened in the same manner if electricity had not been used. I have reported a case[1] very like those related as cures of extra-uterine gestation by electricity, only that electricity was not used. Dr. Petch of York has published a case in

[1] Brit. Med. Journ., June 2nd, 1888.

which, after the fœtal heart had been heard, electricity was used, and the fœtus died and was absorbed. I have seen a very parallel case, in which, at about the sixth month, the fœtus died and the tumour shrank. This case was seen also by Sir Spencer Wells, who had no doubt about the facts. The fœtal heart was heard. The difference between Dr. Petch's case and mine was that in his electricity was used and credited with the cure; in mine it was not.

3. There are unquestionable cases—those of Hicks and Matthews Duncan—in which electricity has failed. In the latter case it was applied by an electrical specialist in doses of extraordinary power, and did not kill the fœtus.

4. The mode in which electricity is supposed to act is not clear; it has been said to kill the fœtus by an electric shock. Now, in Dr. Petch's case the fœtus did not die till four days after the use of electricity. A fatal electric shock does not take four days to kill. In other cases the treatment was a repetition of small shocks for a few minutes together on successive days. This is not the way in which to kill living beings by electricity outside the abdomen. In his present communication Dr. Aveling says nothing about the electric shock, but speaks of the "tetanic contraction" which the current produces, causing the "immediate death" of the fœtus. This I do not follow. I cannot understand the thin, scattered, muscular bundles of the stretched tube producing an effect at all comparable to tonic contraction of the uterus.

But the question is one to be settled, not by argument, but by experience. If I am right in believing that electricity and expectancy are about the same thing, it will not be rash to predict that, if electricity be largely trusted to, we shall hear of other cases of failure.

May I, in conclusion, suggest a little experiment which would throw much light on the question? Could not someone interested in the subject try to kill an *intra-uterine* fœtus by electricity? In a case, for instance, of pelvis so contracted as to prevent the birth of a living child, the patient might be instructed to come for treatment as soon as ever she found reason to think herself pregnant; and then the effect of applications such as are supposed to have killed extra-uterine fœtuses could be ascertained.

I am, Sirs, faithfully yours,

Harley-street, W., June 20th, 1888. G. ERNEST HERMAN.

NOTIFICATION OF INFECTIOUS DISEASES.

To the Editors of THE LANCET.

SIRS,—There are one or two things in Dr. Shirtliff's last letter that require an answer, and I trust you will kindly indulge me once more. *Imprimis*, I would observe that if, as he says, my statistics are bad, his Latin is still worse. According to him, it is with me a case of "statistics *aut præterea nihil*." We have all probably heard of *Aut Cæsar aut nullus*, and of *Vox et præterea nihil*, and by the junction of these two we obtain a kind of chemical compound, which, however, we must leave to Dr. Shirtliff to translate. He further quotes (?) Euclid's first axiom, "Things to be equal to the same must be equal to each other" (but he does not say from what edition), and upon that grounds the assumption that my statistics cannot be trustworthy unless they are "extended over ten or fifteen years, for two towns, one with single and one with equal circumstances in all things in both." (I beg to say I am quoting strictly.) Now, that drives me rather into a corner, since 1877 is the earliest year in which notification of infectious diseases was made compulsory. Bolton, the first town under compulsion (and that of the *dual* kind), is certainly getting tired of it; but as it stands alone, being the only town coming under compulsion in 1877, I must perforce choose a town from some later year. Fortunately, Nottingham, under the single or householder system, appears in the next year (1878), and, although its population is not nearly so dense as that of Bolton, the number is twice as great. It surely cannot be unfair to compare these two towns during six years, when the two Acts have both got into working order—viz, from 1881 to 1886. We then find that the dual system has a bare advantage—3·2 at Bolton, as against 3·3 at Nottingham. The apparent inferiority of the single system in this instance is explained by Dr. Shirtliff himself, who, on the authority of Dr. Whitelegge, the medical officer of health, declares that the medical attendants notify *directly*, instead of handing the certificate to the occupier, as the Nottingham Act directs.

By this comparison, therefore, I am able to say that *voluntary notification* (on the part of the medical attendant) produces results not appreciably less beneficial than where the notification is *compulsory*. At the same time, these results are not better than those obtained in the group of eleven large towns where there is no system of notification whatever, the average zymotic death-rate for these during the same six years being 3·17. Indeed, the e is reason to believe that, whether voluntary or compulsory, notification on the part of the medical attendant is fraught with evil. It begets suspicion of him in the minds of people, and often prevents them from sending for him in cases of suspected infectious disease until the symptoms assume a portentous aspect. Frequently by that time the infective stage has been reached, and the very mischief has been done which notification is intended to check—mischief which, in a large percentage of cases without any notification at all, the skilled advice of a medical man, if in attendance, might have prevented quite effectually. Of this concealment and its result my friend Mr. Corbett and I have heard by letter from various parts of the country where the Act is in force. We have also heard of herbalists and other unqualified persons being called in, and where a registered practitioner is obtained, the least scrupulous as to disobeying the law being chosen. Deaths have occurred from the want of proper medical attendance in towns where the dual system is in force, owing to the dread the people have had of being unduly interfered with; and how can one wonder at this when sanitary officials enter houses and are known far and wide by wearing uniform; when children are torn from their parents by every conceivable threat and sent to hospital; and when persons are kept prisoners at a pest-house for months together, long after they have recovered, for fear they may prove infective. I heard of one unfortunate man who was actually kept from December to April in a small-pox hospital, although a very few weeks would have sufficed so far as he personally was concerned.

Dr. Shirtliff says that "at Norwich the notification is compulsory upon the medical man in attendance, and upon him alone." Since this is his most serious impeachment of my statistics (by which Norwich is included in the group under the single system), I have taken some trouble to ascertain where the truth lies. I have obtained information from the Local Government Board, from the Queen's printers, and from the Town Clerk of Norwich, and I have the Norwich Act, containing the clauses as to notification of infectious diseases, before me. From these varied sources I learn that there is absolutely not one grain of truth in the above statement; for there are three clauses which make it compulsory upon others than the medical man to notify; and there is one clause making it compulsory upon the medical man to certify and deliver the certificate to the occupier &c., but none making it compulsory upon him to notify directly to the authority. The form (a specimen of which I also have) has a printed address, "To the Town Clerk," on the back of it, so that even the householder does not send it direct to the medical officer of health. Of course, no signature but that of the medical man in attendance on the case would appear, and if the form were stamped and sent through the post the medical officer of health might delude himself into a belief that the practitioner had sent it direct. The vaccination officer might do the same with vaccination certificates sent to him signed by private practitioners, but posted by the parents. This is a sufficient answer, also, to what Dr. Shirtliff says regarding Nottingham and Bradford forms when sent by post.

But I wish it to be distinctly understood that I am an opponent of the dual system of notification, rather than an advocate of the single system. I contend that my statistics show most clearly that the dual system does little good, except in the imagination of its votaries. When brought to the stern test of facts, its imposing form collapses, and its amazing virtues vanish into thin air; and in place thereof is left, as at Bolton, a galling sense of disappointment and remorse. In almost every town in which the dual system is enforced, not only the zymotic death-rate but the general death-rate, runs up; so that at Manchester, to take an instance, the death-rate has become actually 50 per cent. higher than in the country at large; and a conference of the sanitary committees of Manchester and Salford (both under the dual system) has been held, with a view to amend the existing state of things. I suppose the time of medical officers of health is now so much taken up by having to

open and register the notification forms they receive that they cannot afford to devote their energies to the "chief duty" set forth by Dr. Shirtliff—namely, "to prevent or check, as far as possible, the outbreak or spread of infectious and all other disease, and to keep their districts in as healthy *and sanitary* condition (the italics are mine) as may be in their power." But if the labour of registration be delegated to underlings, where will the boasted privacy find a place?

I am, Sirs, yours faithfully,

June 18th, 1888. D. BIDDLE.

P.S. Statistics are very much against those who hold that the death-rate (as well as the number of deaths) from zymotic diseases is in any way governed by the number of persons forming the population of a town. Even density of population is quite an uncertain factor in the matter; otherwise Liverpool, which has 109 persons to the acre, and no system of notification, ought to fare worse than Preston, which has only twenty-seven persons to the acre, and the so-called benefit of the dual system; instead of which the average zymotic death-rate of the former (for the six years, 1881-1886) was 4·1, and of the latter 4·6. Now, Liverpool, at the middle of this period, had a population of 566,000; Preston of only 98,000. If their death-rates from zymotic diseases had been reversed, Preston would have saved 47 lives per annum, but Liverpool would have lost 283. Is it likely that Liverpool will be tempted by the example of Preston to take the precious dual system of notification to its bosom? D. B.

To the Editors of THE LANCET.

SIRS,—I find the Act for Norwich, bearing on notification, textually requires the medical attendant to certify to the householder; but the interpretation by the Norwich authorities is that the doctors should notify direct to the town clerk; and practically that is what is invariably carried out at the present time.

In the postscript to my letter of last week the words "dual notification, and with" were omitted; it should have read "two towns, one with single and one with dual notification, and with equal circumstances in all things," &c.

I remain, Sirs, yours faithfully,

Kingston-on-Thames, June 19th, 1888. E. M. SHIRTLIFF.

BLOODLETTING IN PNEUMONIA.

To the Editors of THE LANCET.

SIRS,—A paper by Dr. Hartshorne on "Pneumonia, its Mortality and Treatment," commented on in an interesting article in a recent number of THE LANCET, has elicited letters from various correspondents. Some of these indicate that the writers entertain an amount of distrust, amounting to dread, of the plan of treatment followed fifty years ago in this disease, while others advocate the return, in a modified degree, to the use of venesection in treating pneumonia. I think the letters of Dr. Adams and Dr. Davies justify me in looking at this matter in the light in which I intend to do.

Very many—I am safe to say a large proportion—of those gentlemen who have commenced practice within the last twenty years entertain an exaggerated and mistaken estimate of the effects of bloodletting on the system. Not many of these have seen the beneficial result accruing from the removal of twelve or fifteen ounces of blood from the arm of a robust patient, either male or female, in an upright position, while suffering from a severe attack of pneumonia; and fewer still have themselves performed the trifling operation of venesection. Various reasons are advanced for this change in the treatment of pneumonia and other inflamatory affections. Change of type in disease owing to a more asthenic tone of system, and change in fashion, are the principal. With regard to an alteration in type and change in the system, it may be remarked that evidence is wanting to show that bloodletting in the puerperal female is more fatal now than ever it was, or that patients succumb more readily to profuse hæmorrhage the result of accident or surgical operation. Probably the change of fashion, in so far as the giving of drugs and the abstraction of blood are concerned, is the result of the teaching of homœopathy in a large measure, and is one of the few lessons taught by this system meriting gratitude. To show the harmless, even if not curative, effect of profuse bloodletting as carried out half a century ago, and how innocuous to the patient even when pushed to an extreme length, a case or two may be adduced taken from periodicals of that period.

In the *Edinburgh Medical and Surgical Journal* for 1836, in Dr. Craigie's report of cases of fever treated in the Royal Infirmary, is narrated the case of James F——, aged twenty-four. He was admitted on Aug. 27th in such a state of delirium and excitement that it was necessary to place him under restraint. On Sept. 9th he left the hospital "quite well, but rather weak." During this patient's illness he was bled on four occasions to the extent of sixty-two ounces, and had forty-four leeches applied to his temples.

In the *Medical Gazette* for September, 1839, is reported a lecture by Mr. (now Sir) Rutherford Alcock. In it we find the case of George P——, the recipient of a gunshot wound of the thorax. After detention in a military hospital for seventy-eight days he was discharged cured. On admission this patient had hæmorrhage, checked by a full bleeding, and during the two following days he lost thirty-three ounces of blood from the arm, had thirty leeches applied, and was also cupped.

Once more the practice in regard to bloodletting across the Channel may be noticed. In the issue of the *Gazette* already quoted, in a lecture on inflammatory affections of the cornea, Velpeau says: "If the patient is young, robust, and of a plethoric habit of body, I bleed copiously, to the extent of eighteen or twenty ounces, and repeat the bleeding next day; sometimes also the third day."

I myself have bled patients suffering from pneumonia in 1836; I have also performed the same operation under like circumstances in 1887. In most instances the relief from pain was almost immediate, and the period of convalescence short. Venesection has not been confined to the treatment of pneumonia, but has been practised in inflammations of the serous membranes, with similar results. Of course such a line of treatment has not been pursued without discrimination, due regard having always been had to the condition of the patient.

Were statistics to be called into court to help to decide the relative mortality under the two systems of treatment, it would only be fair to take into consideration the fact that the stethoscope had not fifty years ago enabled the practitioner to make the exact diagnosis in lung disease he can do now; and it is not unreasonable to assume that cases, more or less numerous, were believed to be pure inflammations when a more accurate diagnosis would have revealed the fact that the disease was engrafted on a tubercular lung, or some other condition of pulmonary mischief. Many other ailments besides those alluded to have been, and might be now, alleviated or cured by the judicious and moderate abstraction of blood; notably those caused by uræmic poisoning. Those who advocate abstention from bloodletting in such cases assert that, although you remove a quantity of impure blood, that which is left is equally poisonous. No doubt this is true, but it is equally a fact that, if in a twelve-ounce bottle of liquid of any kind you have an ounce of laudanum, you will only have half an ounce if you pour out a half—a quantity less deleterious absolutely, though not relatively.

Such statements and the clinical history of cases resembling those narrated might surely remove in a large measure the fear of bloodletting in pneumonia and many other diseases, which amounts to what may be well termed hæmatophobia. I do not suggest that the "letting of blood" should be carried to the extent it formerly was in the treatment of disease, but I think that this remedy—powerful for evil, no doubt, as well as for good—ought not to be, as for many years it has been, almost relegated to undeserved oblivion.

I am, Sirs, yours faithfully,

Fourdoun, June 8th, 1888. DAVID JOHNSTON.

REMOVAL OF DISEASED OVARIES.

To the Editors of THE LANCET.

SIRS,—I would request space to thank Dr. Robert Barnes and Dr. Granville Bantock for their kind commendation of my recent communication to your columns, and to make two remarks. For the benefit of those who, like myself had deduced from his classical writings on the subject that Dr. Barnes was averse to the early removal of ovarian tumours, I would venture to emphasise the statement he makes in your issue of June 9th, p. 1155, that "the sooner a diseased ovary is recognised and removed the better." Considering the enormous importance of the subject to thousands of women,

such an expression of opinion from so renowned a clinical teacher should certainly be most widely known and frequently reiterated. In the next place, I must explain that it would have been quite beyond the scope of my paper on fatty degeneration of the heart from intra-abdominal pressure to have referred to the strenuous efforts made by Dr. Bantock—and, I would add, by Mr. Lawson Tait also—to enforce the necessity of early operation in cases of ovarian diseases. But, judging from the pathological results in cases where operative measures have been long deferred, I am compelled to believe that to their precept and practice in this matter must be largely ascribed the ever-increasing success which has been gained in the domain of abdominal surgery.

I am, Sirs, yours faithfully,

Upper Wimpole-street, June 16th, 1888. BEDFORD FENWICK.

MALINGERING.

To the Editors of THE LANCET.

SIRS,—The curious case of malingering in THE LANCET of June 2nd reminds me of another which occurred in my practice, and may be of interest to many of your readers.

A girl aged sixteen, apparently in good health, was shown to me by the mistresses of a boarding school. She had been suffering for some days from a swollen and discoloured hand. The weather having been cold, they at first attributed the swelling to chilblains, but now they were thoroughly frightened, and thought mortification had set in. I found the hand much swollen, the skin and nails of a purple hue, the back of the hand œdematous, and pitting on pressure. So serious did the case appear that an eminent physician, who was seeing another case in the house, saw her with me, and advised a deep incision in search of matter. This was not done, but, remembering a conversation I once had about a similar case with the late Sir Wm. Fergusson, I directed them to have the young lady watched day and night, and report the result. A hole was made in her bedroom door, and the mistresses undertook to watch all night. About the small hours she was seen to rise from her bed and proceed to a chest of drawers. From a corner of a drawer she produced a long coil of soft satin ribbon. This she wound round and round the upper arm very tightly, and then returned to bed. After some hours she unwound the ribbon, replaced it in its corner, and slipped into bed. In reply to their anxious solicitation for advice, I recommended change of air, and accordingly the black sheep was sent away home, far away from the fold which she had endeavoured to pollute by her unseemly tricks. Some weeks later I had a letter from her father, describing this extraordinary case. I wrote him a private letter, giving him the particulars noted above.

I am, Sirs, yours obediently,

Richmond, Surrey, June 12th, 1888. WM. ANDERSON.

ASSOCIATION OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—We enclose herewith the reply received by us to the letter addressed by our committee to the Lord President of the Council. We may add that Lord Randolph Churchill has consented to receive a small number of our committee to-morrow (Thursday) morning in order to hear their views as to the position of the Members of the Royal College of Surgeons.—We are, Sirs, your obedient servants,

WARWICK C. STEELE, } Hon.
June 20th, 1888. WM. ASHTON ELLIS, } Secs.

Council Office, Whitehall, June 16th, 1888.

SIR,—In reply to your letter of the 12th inst. on the subject of the petition of certain Members of the Royal College of Surgeons with reference to the constitution of that College (lodged at this office on May 3rd, 1887), I am directed by the Lord President of the Council to inform you that it is not usual to send a written reply to petitions on the subject of a question which is before the Privy Council. The petitions or statements in such cases are fully considered before any decision is arrived at, and the result is that Her Majesty is advised either to grant, to refuse, or to modify the proposed Charter.

I am, Sir, your obedient servant, C. L. PEEL.

THE General Committee of the Society for the Prevention of Hydrophobia, in consequence of the refusal of the Government to introduce a Bill for the Suppression of Rabies in Dogs, have resolved to at once seek to promote its own Bill with that object in the House of Lords.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE.

THE report of the Tyne Port Sanitary Authority shows that during the months of April and May the number of vessels inspected had been as follows:—British steamers 1154, British sailing vessels 469, foreign steamers 292, foreign sailing vessels 131, making a total of 2046. Fifty-eight cases of sickness had come under notice and had been investigated; one vessel having small-pox had been fumigated and the patient removed to hospital by the medical officer, Mr. H. E. Armstrong. There had been an increase of emigrants arriving in the Tyne *en route* to America. The annual meeting of the Cathedral Nurse and Loan Society has been held. This Society has increased so much in the recognition of the public and of the medical profession and the poor that the nurses have been unceasingly employed to the utmost of their time and energies. The majority of the cases have been of a severe character requiring much nursing skill, and calling for visits of the nurses of a prolonged and anxious nature, and the nursing throughout the year has been of a specially important character. The number of cases visited have been 1340, visits paid 14,615; 1416 dinners have been issued from the invalid kitchen, and many thousand separate articles of food. A small cottage hospital has also been established for convalescents by the Society. It is situated at Shotley Bridge, in the county of Durham, which at present provides seven beds for adults and children. The committee regret that the income of the Society for the past year has not met its expenditure by over £100. The Newcastle guardians on Tuesday last resolved by a very large majority to allow the late surgeon to the workhouse, Mr. N. Hardcastle, a pension of £80 per annum. Had it been much larger, Mr. Hardcastle would have well deserved it after his faithful service of thirty-three years.

THE WEATHER AND HEALTH IN THE NORTH.

The death-rate last week in Newcastle was the lowest ever recorded, about 13 per 1000. Some concern is felt about the appearance of small-pox in Hull owing to its frequent communication with Newcastle; but I believe Newcastle, as a city, was never so well prepared as at the present to cope with any infectious disease. The weather for the past week has been changeable, but on the whole cool for the time of year; it is remarked, however, that we rarely get settled or warm weather here before the 21st of June. But we believe that this is made up to us by very fine autumnal seasons, with a freedom from moisture and fogs. At Harrogate there was fine weather up to Wednesday last, when a thunderstorm passed over, accompanied with much rain; since then it has been cool but fair. At Ilkley the prospects of fine weather are more favourable, while at Saltburn it has been very changeable. At the watering places on the Northumbrian coast, warm, genial weather has been experienced during the week; cooler towards evening, with fair prospects of continued good weather. At Whitby the weather has been bright and warm during the greater part of the week, though the wind blew steadily from the east during the greater part of Wednesday.

THE EPIDEMIC OF PNEUMONIA AT MIDDLESBROUGH.

A local paper states that 275 deaths have taken place in Middlesbrough since last November from pneumonia. Dr. Malcolmson, the medical officer of health, who has asked for the inquiry now pending, stated at the meeting of the Town Council that he had attended sixty paupers with about one blanket to every five, and yet he had only five deaths. He also complained of the want of proper hospital accommodation for these cases, and stated that during the past month, of a mortality of 217 deaths, 103 were caused by pneumonia, bronchitis, and consumption. It is not known yet upon what class of people this enormous mortality has fallen, but most probably it will have been upon the working classes. The industries of the town cause much over-heating of the workers. Then, again, the situation of the place and its exposure to cold winds will probably be shown to have been the principal factors in producing the epidemic: but upon this point and others we must wait for definite information from the inquiry of Dr. Ballard, who is now on the spot. So far, with the

exception of his visit to the North Riding Infirmary and to the homes of those who have suffered from the disease, his inquiry has been of a private nature.

Newcastle-on-Tyne, June 19th.

EDINBURGH.

(From our own Correspondent.)

THE ROYAL SOCIETY.

AT last Monday's meeting, Professor McIntosh of St. Andrews read an interesting paper on the Early Stages of Development of certain Fishes, particularly in regard to the Cod; and cleared up many points that have long been unsolved problems in natural history. With the aid of a well-equipped marine laboratory, Dr. McIntosh has succeeded in tracing the embryo fish from the ovum onwards to the adult condition, taking careful measurements and other observations at various stages of its development. Among other papers contributed to the Society's proceedings was one by Dr. Haycraft on a Clinical Method of Testing the Alkalinity of the Blood.

MEDICO-CHIRURGICAL SOCIETY.

At the last meeting a series of interesting cases and specimens were exhibited to the members. Dr. George Mackay showed a case of a young child in whom a primary Hunterian sore on the upper eyelid was clearly to be distinguished, followed by the invasion of marked symptoms of secondary syphilis. Professor Grainger Stewart exhibited an interesting case of recurring unconsciousness accompanied by stertorous respiration. The patient is blind in one eye and slightly ataxic. Whenever the remaining eye is closed the attack instantly supervenes and continues for about eighty seconds. This phenomenon is persistent and invariable; it has persisted for sixteen years, during which time the patient has been obliged to adapt her mode of life to this singular disability. Dr. Brackenridge showed a rare case of unilateral spinal paralysis due to alcoholism, in which there were some interesting anomalies in the reflexes present on the two sides of the body. Dr. Maclaren produced a specimen showing a melanotic sarcoma growing in the sole of the foot, with the lymphatics leading from it blocked with melanin pigment as high as the middle of the leg, and some glands showing similar discolouration at a higher level. Dr. Cotterill exhibited fifteen inches of transverse colon successfully removed from a patient suffering from strangulated umbilical hernia. Other interesting specimens were also shown. The Society then listened to a joint paper by Drs. Cotterill and Woodhead on a recent epidemic of sore throat in its relation to milk supply. Clinical evidence showed apparently a definite causal relationship between milk supply and the epidemic, for when the former was suspended the latter ceased, to recommence when the milk supply was re-established, and again to cease on its discontinuance. Alongside this very complete clinical picture of the outbreak were observations on the cows yielding the milk, showing them to have been affected with a vesicular disease of the udders closely resembling the Hendon disease. This occurred at the same time as the sore-throat epidemic; it was looked upon as the cause of the outbreak. In the discussion that followed, Professor MacFadyean, of the Royal Veterinary College, brought forward some observations made upon the cows under consideration on behalf of the Privy Council, which went to show that the bovine and human disease were not simultaneous and coterminous, but that the former persisted long after the latter had disappeared. The discussion was continued by Dr. Brakenridge, who spoke of the clinical aspects of the case, narrating his own experience of several cases that coincided with Dr. Cotterill's description. Dr. Peel Ritchie and Dr. Foulis also spoke on the subject, the latter referring specially to the value of heat in disinfecting milk. Mr. Hare referred to the dilemma in which the Society was placed between the conflicting clinical and experimental observations in the case under discussion, and suggested that there may be other requisites besides disease in cattle and susceptibility in man to produce such an epidemic as that which had occurred. Dr. Burn Murdoch and Dr. Allan Jamieson also joined in the discussion.

Edinburgh, June 20th.

DUBLIN.

(From our own Correspondent.)

ROYAL ACADEMY OF MEDICINE IN IRELAND.

WITH regard to the contest for the presidency of the Academy which is likely to take place between Drs. Gordon and Kidd, it is sincerely to be hoped in the interests of the Academy that some compromise may be effected and a contest avoided.

THE LATE QUEEN'S UNIVERSITY: THE CASE OF DR. PYE.

In the Exchequer Division last week, before Lord Chief Baron Palles and two other judges, counsel for Dr. Pye moved for a conditional order for a declaration that Dr. Pye was entitled to compensation for loss of fees arising out of the abolition of the Queen's University in Ireland. In consequence of the new arrangements made for the working of the Royal University, Dr. Pye's fees fell off from £500 per annum to about £150, and the question for the decision of the Court was whether provision for compensation contained in the Royal University Act would entitle Dr. Pye to compensation for loss of fees. The Lord Chief Baron reserved the question of law for the Divisional Court, and the conditional order to have that question of law discussed was granted.

BATTINGLASS UNION.

Dr. Hawes having retired as medical officer of the Union, the dispensary committee recommended his receiving a retiring allowance of £52 a year, which has been ratified by the guardians. Dr. Hawes was thirty-three years in the employment of the guardians, and can justly complain of the inadequate way in which his long services have been rewarded.

PHARMACY ACT (IRELAND), 1875, AMENDMENT BILL.

This Bill was read a second time in the House of Lords on the 8th inst., and on the motion of the Earl of Milltown was referred to a Select Committee. The Select Committee, consisting of the Earl of Milltown, Lord De Ros, Earl of Limerick, Earl of Meath, Lord Lurgan, and Lord Basing, held their first meeting on the 15th inst. As already mentioned in your columns, the Bill is intended to remedy the grave defects of the Act of 1875, and, by imposing restrictions upon the sale of poisons in Ireland by unauthorised persons, it will be of considerable benefit to the public.

APPOINTMENT OF GOVERNORS TO IRISH LUNATIC ASYLUMS.

A circular relative to the system of appointing governors to lunatic asylums in Ireland has been issued by the Under Secretary to the Lord Lieutenant for the consideration of the governors of those institutions. At present the appointment of the governors is vested by law in the Lord Lieutenant, who alone is responsible for the selections made; but it is suggested that the nomination of one-half of the number of governors on each board should be delegated to the local authorities, and that his Excellency should select the names from lists to be annually submitted by them; but if from the names furnished he could not find a sufficient number of suitable ones, the vacancies should either be left unfilled, or other governors appointed by his Excellency.

In consequence of the death of Dr. St. George Roe, medical officer of Coolaney Dispensary, Tobercurry Union, an election for his successor takes place this week.

Dublin, June 19th.

PARIS.

(From our own Correspondent.)

FIBROID TUMOURS AND GALVANISM.

THE treatment of fibroid tumours of the uterus and other affections of that organ by the application of galvanism is not new—as in France, at least, it was founded by the late Dr. Tripier; but to Dr. G. Apostoli, his pupil, is due the reintroduction of the method in gynæcological practice. Specialists in that branch are, however, divided as to the value of the method in the cases referred to. Dr. Léon Danion, a distinguished electrician, and editor of the *Electrothérapie*, criticised the method and made a communication to the Academy of Medicine on the subject. The title of his paper was: "On the Danger and the Inutility of great

Chemical Galvano-caustic Intensities, notably in their applications to Uterine Affections." In his preliminary remarks, the author stated that great voltaic intensities may be considered, in medicine, to commence at about from 50 to 55 milliampères. Ordinarily when this intensity is passed, it is intended to produce in electrisation a caustic effect; but one can employ intensities of 70, 80, and even 100 milliampères, and only leave insignificant traces of their passage. For this it is sufficient to employ large damp electrodes. One can produce a caustic effect with very feeble intensities by employing inverse procedure. According to Dr. Apostoli's method, the great intensities have been employed only under the form of chemical galvano-caustic. This method consists in mono-polar intra-uterine applications of the voltaic method, determining a violent caustic action. Sometimes the excitator is plunged into the uterine tissue, but the basis of the method consists principally in the employment of galvano-caustics of great intensity. The author asks: Are these great intensities inoffensive? Are these great intensities useful? After dilating on the subject, and endeavouring to resolve the double question by clinical study and experimental physiology, Dr. Danion formulated the conclusions of his paper as follows:—1. Numerous and varied experiments on animals have demonstrated that high galvano-caustic intensities determine congestions often of a violent character, frequently followed by inflammation of the organs interested. 2. The clinical results obtained in the treatment of uterine affections confirm in a very distinct manner these experimental electro-chemico-caustic effects. These high intensities may, in this case, determine grave inflammatory phenomena, the issue of which it is impossible to foresee. 3. There does not exist any physiological datum, any empirical result, in a word, absolutely nothing—which would plead in favour of the substitution of high intensities for low and medium intensities, the latter being completely inoffensive; whence it follows that the method of high intensities is not only dangerous, but absolutely useless. 4. The high voltaic intensities (non-caustic) appear inoffensive, but new experiments are necessary to confirm this conclusion.

SACCHARIN.

At a meeting of the Council of Ministers last week, M. Viette, the Minister of Agriculture, brought to notice the rapid extension of saccharin in commerce. The Minister stated that chemists have succeeded in extracting this new substance from tar, and that, notwithstanding the name given to it, its chemical composition is not that of sugar. It is now being manufactured on a large scale, and, its price being lowered, it tends to supplant sugar. Its sweetening power is about 200 times more developed than that of sugar. Grocers and confectioners have commenced to employ it in their syrups and preserves. The Minister then made the following propositions: 1. That the Council of Hygiene and of Salubrity be consulted as to the innocuousness of this new substance which is being introduced into alimentation. 2. In the case where its innocuousness will be recognised, the manufacturers of syrups and preserves should be compelled to label these substances as containing saccharin, as is now done for butter and margarine. 3. To impose an excise on it proportional to that which is established for sugar.

THE USE OF OXYGEN.

At the last meeting of the Council of Hygiene, Dr. Voisin, Director of Public Aid, was charged to draw up instructions as to the manner in which the recipients of oxygen should be employed in certain cases of accidents. By order of the Prefect of Police, a recipient has been placed in each of the sixteen pavilions destined for the reception of the drowned which have been established on the banks of the Seine. Dr. Voisin called the attention of the Council to the necessity of placing similar recipients at all the police stations and of those of the firemen of the city of Paris. These apparatus, which are not to be found at all the chemists' shops, will render great service in cases of asphyxia.

FRENCH TEMPERANCE SOCIETY.

At the annual meeting of the Société Française de Tempérance, which was held on the 10th inst., and presided over by M. Jules Simon, Senator, the first prize, consisting of a vermilion medal, was awarded to Dr. Emile Monin, for his essay on the Dangers of the Abuse of Alcoholic Drinks.

Paris, June 19th.

NEW YORK.

(From our own Correspondent.)

THE AMERICAN MEDICAL ASSOCIATION.

THE thirty-ninth annual meeting of this body was held at Cincinnati, May 8th, 9th, 10th, and 11th. The attendance was very large, and the work done in sections was unusually interesting. Addresses were delivered in Medicine, Surgery, and State Medicine. The Journal of the Association was reported to be in a very good financial condition, as it paid all of its expenses and left a balance to the Association. The committee to raise a fund for a monument to the memory of Dr. Benjamin Rush reported favourably, but scarcely $1000 has as yet been received. One of the most interesting papers was presented to the Section on Surgery. It was entitled "Diagnosis of Injury of the Gastro-intestinal Canal." The author, Dr. Senn, contends that rectal insufflation of hydrogen gas or air is an infallible test in the diagnosis of visceral injury of the gastro-intestinal canal in penetrating wounds of the abdomen without laparotomy. He states that hydrogen gas is devoid of toxic properties, non-irritating, and rapidly absorbed from the connective tissue spaces and all of the large serous cavities. The method consists in insufflating the rectum with a rubber balloon containing four gallons of gas or air, gas being preferred; the insufflation must be very gradual, as the resisting power of the intestinal wall is nearly the same throughout, and yields to a diastaltic force of from eight to twelve pounds; the escape of gas through the ileo-cæcal valve from below upwards is attended by a blowing or gurgling sound. The gas will finally traverse the entire alimentary tract and escape at the mouth. A lesion of the tract is known by the failure of the gas to pass beyond that point. Dr. Senn demonstrated his method by rectal insufflation of anæsthetised dogs, and proved that the gas had passed through the entire intestinal tract by igniting the gas as it escaped from the dog's mouth. He shot the dog's abdomen, exposed the cavity by incision, then resorted to insufflation, and applying a match discovered the first perforation. This was closed by suture, and insufflation repeated, when another jet of flame indicated the point of lesion. The perforations were closed one after another, until the gas finally escaped from the mouth, proving that the intestine was intact. These experiments excited the greatest interest, and give promise of excellent practical results.

INTERNATIONAL CONGRESS OF ANTHROPOLOGY.

This new Society met in New York on June 5th, and continued in session two days. The Congress is devoted to the investigation of man. The papers and discussions related to his place in the scheme of nature, an examination into the underlying laws of mental growth, and descriptions of the varieties of the species, their characteristics and relationships. The sections are Anthropology, Ethnology, Ethnography, and Prehistoric Archæology. The attendance was small but select, and among the foreign members was Prince Roland Bonaparte of Paris. The more important papers read were the following: "Criminal Anthropology, Criminal Biology and Sociology, a Note on Crime and Criminals," by Dr. Henry Maudsley of London; "Les Habitants de Suriname à Amsterdam," by Prince Bonaparte, and also an account of his visit to Lapland; "Mental Automatism," by Prof. Thwing of Brooklyn; "Inebriate Heredity," by Dr. Norman Kerr of London; "The Problem of the Ohio Mounds," by Prof. Thomas of the Smithsonian Institute; "Anthropathogism, Historic and Prehistoric," by Gen. Chas. W. Darling; "Transmission of Deformity through three Generations," by Dr. Holbrook of New York.

NATIONAL CONFERENCE OF CHARITIES AND CORRECTIONS.

The fifteenth annual meeting of this body meets at Buffalo, New York, July 5th, and continues its session six days. The subjects to be discussed are, "Industrial Training in Juvenile Reformatories"; "The Commitment and Detention and the Treatment and Care of the Insane"; "The Training and Care of the Feeble-minded"; "Reformation as an end in Prison Discipline"; "Charity Organisation"; "Immigration"; "Outdoor Relief and Hospitals"; "Municipal Charities and Corrections"; "Care and Disposal of Dependent Children." These conferences are largely attended, and are productive of reforms in the charities of the United States.

New York, June 6th, 1888.

Obituary.

THOMAS HARRINGTON TUKE, M.D. ST. AND., &c.

WE regret to record the death of Dr. Harrington Tuke, which occurred on June 9th, at the age of sixty-two, Dr. Tuke was widely known as a practical psychologist, and as a kind and true friend to all in distress. He was ever willing to lend a helping hand to the young practitioner, and his hospitality, both to his town and country friends, was unbounded. He was for many years proprietor and physician of the Manor House, Chiswick, where his lamented death took place, and he also carried on at the same time active private practice in Albemarle-street. As a genial host, a cheery physician, and an amiable companion, his loss will be much felt by all.

Dr. Tuke obtained the degree of M.D. St.And. in 1849, the F.R.C.P. Edin. in 1858, and the F.R.C.P. Lond. in 1868. He was educated at St. George's Hospital, where he was well known and universally respected. He held the distinguished post of President of the Medico-Psychological Association, and for eight years, from 1864 to 1872, the important office of secretary of that learned body, which now numbers over 400 members in its ranks. He was also an honorary member of the Société Médico-Psychologique of Paris, and of the Imperial College of Physicians of Vienna. Dr. Tuke was so much absorbed in the cares of an unusually large practice that he was unable to contribute as much as other members of the Association to the literature of psychology. In the *Journal of Mental Science* he, however, published papers on Baths in Insanity; we may also mention his evidence before the Committee of the House of Commons, and the correspondence thereon, on Forced Alimentation (in which the advantages of nasal feeding were plainly set forth); a long series of papers on General Paralysis of the Insane (in which the distinctions between epilepsy and the epileptiform convulsions of general paralysis were pointed out); a paper on the Legal View of Insanity; one on Monomania; his Address as President of the Association in 1873: some interesting Statistics of Asylums; and his Address at the meeting of the British Medical Association; he also contributed a paper on the Criminal Responsibility of the Insane to the St. Andrews Medical Reports, the University from which he obtained his degree as a Doctor of Medicine.

The deceased gentleman was a lover of the fine arts, the hall in the Manor House, Chiswick, being well supplied with proof prints of Sir Edwin Landseer's greatest works. As a physician and as a host, his professional and social qualities will not be easily forgotten by those who enjoyed the privilege of his acquaintance.

Dr. Tuke leaves a wife, one daughter, and five sons, one of whom is in the medical profession.

Medical News.

UNIVERSITY OF OXFORD.—The following degrees have been conferred on the candidates mentioned:—

Doctor of Medicine.—Alexander Haig, Exeter; Thomas T. Whipham, Oriel; Charles Chadwick, Oriel.

Bachelor of Medicine.—Richard Ackerley, Corpus; John Wayte, Trinity; Horace G. Turney, Trinity; Leonard George Guthrie, Magdalen; James G. B. Colby, Wadham; George Heaton, Magdalen; Charles Matthews, Exeter.

UNIVERSITY OF DURHAM.—At the recent examinations for degrees in Medicine and Surgery the following candidates satisfied the examiners:—

Degree of Doctor in Medicine for Practitioners of Fifteen Years' Standing.—Alan Reeve Manby, M.R.C.S., L.S.A.

Degree of Doctor in Medicine (Essay).—Charles Samuel Blair, M.B., M.R.C.S.; Guthrie Neville Caley, M.B., M.S., L.R.C.P., M.R.C.S.; John Henry Garrett, M.B., B.S., L.S.A., L.S.Sc.; Arthur Ernest Larking, M.B., M.R.C.S., L.S.A.; Charles Edward Tanner, M.B., F.R.C.S.; Auburn Wilkinson, M.B., M.S., M.R.C.S., L.S.A.; Edward Herbert Young, M.B., L.R.C.P., M.R.C S., L.S.A.

Degree of Bachelor in Medicine (Final).—Sidney James Allden, College of Medicine, Newcastle-on-Tyne; Laurence Augustus Baine, College of Medicine, Newcastle-on-Tyne; Robert Crewdson Benington, L.R.C.P., M.R.C.S., L.S.A., L.S.Sc., St. Thomas's Hospital; Sidney Algernon Bontor, L.R.C.P., M.R.C.S., St. Bartholomew's Hospital; Ellis Bowker, Owens College; Edward Bowmaker, College of Medicine, Newcastle-on-Tyne; William Charles Brown, College of Medicine, Newcastle-on-Tyne; †Fateh Chand, L.R.C.P., L.S.A., L.M.S. (India), Punjab University, India; Thomas Clifford, L.R.C.P., M.R.C.S., College of Medicine, Newcastle-on-Tyne; Norman Davis, College of Medicine, Newcastle-on-Tyne; Henry Luther Ewens, Bristol Medical School; James Hindhaugh, College of Medicine, Newcastle-on-Tyne; Arthur Knight Holt, L.R.C.P., M.R.C.S., St. Bartholomew's Hospital; Edwin Whitfield Dawson Kite, M.R.C.S., L.S.A., Queen's College, Birmingham; Henry McLagan, College of Medicine, Newcastle-on-Tyne; Isaac Gibson Modlin, L.S.A., College of Medicine, Newcastle-on-Tyne; William Molesworth, Bristol Medical School; William Pitt Palmer, L.R.C.P., M.R.C.S., L.S.A., L.S.Sc., St. Bartholomew's Hospital; *Henry Jules Parry, College of Medicine, Newcastle-on-Tyne; †John William Buckley Pogson, Queen's College, Birmingham; Nathan Raw, College of Medicine, Newcastle-on-Tyne; Bhagat Ram Sawhny, L.R.C.P., M.R.C.S., L.M.S. (India), Punjab University, India; Herbert Algar Sweetapple, College of Medicine, Newcastle-on-Tyne; Robert Thompson, L.R.C.P., M.R.C.S., Guy's Hospital.

Degree of Bachelor in Surgery.—Sidney James Allden, College of Medicine, Newcastle-on-Tyne; Octavius William Andrews, M.B., M.R.C.S., St. George's Hospital; Robert Crewdson Benington, L.R.C.P., M.R.C.S., L.S.A., L.S.Sc., St. Thomas's Hospital; Sidney Algernon Bontor, L.R.C.P., M.R.C.S., St. Bartholomew's Hospital; John Smith Bootiman, M.B., College of Medicine, Newcastle-on-Tyne; Ellis Bowker, Owens College; Edward Bowmaker, College of Medicine, Newcastle-on-Tyne; Richard Brown, M.B., College of Medicine, Newcastle-on-Tyne; William Charles Brown, College of Medicine, Newcastle-on-Tyne; Fateh Chand, L.R.C.P., L.S.A., L.M.S. (India), Punjab University, India; Norman Davis, College of Medicine, Newcastle-on-Tyne; Henry Luther Ewens, Bristol Medical School; James Hindhaugh, College of Medicine, Newcastle-on-Tyne; Arthur Knight Holt, L.R.C.P., M.R.C.S., St. Bartholomew's Hospital; Harry Brandreth Lavies, M.R.C.S., L.S.A., King's College; Isaac Gibson Modlin, L.S.A., College of Medicine, Newcastle-on-Tyne; William Molesworth, Bristol Medical School; William Pitt Palmer, L.R.C.P., M.R.C.S., L.S.A., L.S.Sc., St. Bartholomew's Hospital; Henry Jules Parry, College of Medicine, Newcastle-on-Tyne; John William Buckley Pogson, Queen's College, Birmingham; Nathan Raw, College of Medicine, Newcastle-on-Tyne; Bhagat Ram Sawhny, L.R.C.P., M.R.C.S., L.M.S. (India), Punjab University, India; William Rushton Shortt, M.B., College of Medicine, Newcastle-on-Tyne; Herbert Algar Sweetapple, College of Medicine, Newcastle-on-Tyne.

* First-class Honours. † Second-class Honours.

THE GREAT NORTHERN CENTRAL HOSPITAL.—The visit of the Prince and Princess of Wales to open this hospital will not, in consequence of the death of the German Emperor, take place on the 25th inst. as arranged, but their Royal Highnesses will perform the ceremony in the latter part of July.

PRESENTATION.—Dr. Talfourd Jones, of Brecon, on his leaving the town to practise at Eastbourne, has been presented by the inhabitants and many friends in the county, in testimony of their regard and esteem, with a silver tea and coffee service and a breakfast tray, a reading lamp, a library writing set, and an illuminated address.

DEATH FROM WOOLSORTERS' DISEASE.—At Allerton, a woolsorter, aged forty-eight years, died from woolsorters' disease a few days since. He had been working for a fortnight, and was ill for a week before he called in Dr. Cogan. He became worse, and Dr. Bell visited him. They agreed in the opinion that it was a case of woolsorters' disease. Both visited the patient again on the night previous to his succumbing the following morning to the malady. For twenty years the deceased had been in the same employment.

A FATALITY FROM CHLOROFORM.—At the Royal Albert Hospital, Devonport, on the 12th inst., an inquest was held on a middle-aged woman who died under the influence of chloroform. The deceased had previously undergone an operation for cancer, but on the second occasion immediately it was administered she fainted and died. This is the first time for twenty-seven years that such an accident has occurred in the hospital. The verdict of the jury exonerated the medical staff from any blame.

CHARITABLE BEQUESTS.—The late Mr. David Spencer, of Coventry, has bequeathed £2000 to the Coventry and Warwickshire Hospital. By the will of the late Miss Garratt, of Mount Ararat, Richmond, Surrey, £100 is left to the Richmond Hospital. It is announced that by the will of the late Mr. J. W. Dod the Bristol Infirmary and General Hospital will each benefit to the amount of £10,000. The late Mr. George Watson, Park House, Dick-place, Edinburgh, has bequeathed £100 each to the Edinburgh Royal Infirmary and the Edinburgh Sick Children's Hospital. Mr. John Bakewell, of the Old Hall, Balderton, Newark, by his will leaves £200 to the Newark Hospital.—Mr. John Standring, of Manchester, in accordance with a wish expressed by his late brother, Mr. Thomas Standring, has just sent £500 to the treasurer of the Lock and Skin Diseases Hospital in that city, as a donation to that hospital.

THE NEWARK HOSPITAL.—Viscountess Ossington has given £150 to this hospital, to be applied to the extraordinary expenses of draining and cleansing the institution.

HOSPITAL SATURDAY AT SUNDERLAND.—A house-to-house collection was recently made in this town for the first time on behalf of the Sunderland Infirmary. The town was divided into twenty districts. The experiment was very successful, and will be repeated annually. It is estimated that £500 were collected.

QUEEN'S COLLEGE, CORK.—The following prizes have been awarded at the recent sessional examinations in the Faculty of Medicine:—Midwifery: Jeremiah Kelleher 1st; P. J. Byrne 2nd. Practice of Medicine: John Hennessy 1st; Wm. J. O'Donnell 2nd. Medical Jurisprudence: J. Jackson 1st; J. H. Wilson 2nd; J. V. Ryan 3rd. Materia Medica: E. W. Allison 1st; George E. Walker 2nd; E. V. Eames 3rd. Anatomy and Physiology: Third Year—John Hennessy 1st; Thomas Jones 2nd; Wm. J. O'Donnell 3rd. Second Year—E. V. Eames 1st; Michael Toomey 2nd. Practical Anatomy: Third Year—John Hennessy 1st; Wm. J. O'Donnell 2nd; Isaac Banks 3rd. Second Year—George S. Walter 1st; Michael Toomey 2nd; H. Chesnut 3rd; E. V. Eames 4th. Practical Physiology and Histology: John Hennessy 1st. Exhibition in Practical Medicine: J. V. Ryan. Exhibition in Practical Surgery: G. W. Jenney. Exhibition in Practical Midwifery: J. V. Ryan.

HARROGATE BATH HOSPITAL.—It was announced at a special meeting of the governors of this institution, held on the 7th inst., that Miss Rawson of Nydd Hall (who had previously given £3500 towards the erection of a convalescent home in connexion with the new building of the hospital) intended to complete the same at her own expense, at a cost of £10,000 or upwards. This offer was accepted by the governors on the conditions previously submitted to them, and a committee was appointed to give full legal effect to Miss Rawson's wishes. Next came under the consideration of the meeting Lord Harewood's offer of a gift of a plot of land, at the east end of the present grounds, including a valuable plantation of trees, which was also accepted. It was then announced that the Harrogate Waterworks Company, to aid the charity, had consented to sell a large reservoir (at present used for storing sulphur water for bathing purposes) to the hospital for £100—a nominal sum.

CITY OF LONDON TRUSS SOCIETY.—This institution, founded in 1807, held its eighty-first annual festival in aid of its funds at the Albion Tavern, Aldersgate-street, on the 14th inst. Mr. John Norbury (treasurer) presided, and was supported by a large and influential assembly. Over 436,202 patients, of all ages and both sexes, have been relieved since the formation of the charity. The cost of instruments has of late been augmented by the increasing number of aggravated cases, and additional funds are urgently required. Several toasts were proposed and responded to, and at intervals some excellent singing by professionals was given. The secretary announced subscriptions to the amount of £550.

MEDICAL NOTES IN PARLIAMENT.

Universities (Scotland) Bill.

In the House of Lords on the 19th inst., the report of amendments to this Bill was received. Some verbal amendments were inserted in the Bill, and the report was agreed to.

English University Colleges.

In the House of Commons on the 18th inst., Sir J. Lubbock asked the Chancellor of the Exchequer whether he could yet state the intentions of the Government as to affording any assistance to the English University colleges.—The Chancellor of the Exchequer, in reply, said that this question would have been more properly addressed to his right hon. friend the Vice-President of the Council. He might say, however, that he believed that the Lord President and the Vice-President received a deputation on this subject, and have since been in communication with the various colleges in order to ascertain all the material facts of their position. The information asked for is not yet in all cases complete.

Small-pox Hospital at Darenth.

In answer to Mr. Pickersgill, Mr. Ritchie said that the tenders for the erection of the hospital for convalescing small-pox patients at Darenth ranged from £41,923 to £59,100. The lowest tender was by a firm at Sleaford, and before the tender was accepted the managers received a communication from the firm, requesting that they might be allowed to withdraw their tender, as the cost of the cartage and other matters very much exceeded what they had anticipated. The next lowest tender, which was for £47,000, was accepted.

Victoria University Bill.

This Bill was read a third time.

Local Government Bill.

The consideration of this Bill in Committee was resumed. Clause 6, which gave power to quarter sessions to appoint a committee to visit and inspect lunatic asylums, was negatived without discussion, an amendment by Mr. Leighton having been by leave withdrawn.

On the 19th inst. the consideration of the Bill was resumed. On Clause 8, which effects the transfer to the County Council of the powers of certain Government departments and other authorities, Mr. Chaplin moved that in place of the opening words of the clause, "on and after the appointed day," the following words should be inserted:—"It shall be lawful for Her Majesty the Queen in Council if satisfied of such approval as hereinafter mentioned from time to time by order to transfer to the council of a county all or any of" the powers, duties, and liabilities mentioned. He explained that the object of the amendment was, instead of transferring these powers by the Bill, to enable them hereafter to be transferred by Order in Council. It would be unwise to load these new authorities with too onerous duties in the first instance.—Sir M. W. Ridley supported the amendment, though he admitted it had the appearance of emasculating the Bill. It was because he wished the system to be a success that he was anxious not to overburden the new bodies, and supported the amendment.—Sir L. Playfair agreed with the hon. gentleman who had just spoken that there were certain powers which the Local Government Board and the Board of Trade possessed, and which it was not desirable to give at once to the County Councils. For example, there was the power concerning the health of the whole county that was at the present moment carried into successful operation by a skilled staff of medical officers under the Local Government Board. According to this Bill those powers were to be at once transferred to unskilled medical officers, some of whom had had no training for such purposes, while others had never had the opportunity or the inclination to study sanitary questions. Unless the right hon. gentleman intended afterwards to put down amendments giving such powers to the County Councils as would enable them to get properly qualified medical men to look after the health of the community, he thought the Bill would lead to a great deterioration instead of an improvement in the public health. Until he knew that the right hon. gentleman intended to move such amendments he should support the amendment of the hon. member for the Sleaford division of Lincolnshire.—Mr. F. S. Powell corroborated what had been said by the last speaker with reference to medical officers.—A long discussion followed, and the amendment was ultimately withdrawn upon Mr. Ritchie saying that if the right hon. gentleman would withdraw his amendment he should be quite willing to insert "the Local Government Board may from time to time by provisional order transfer" these powers.—A motion to report progress was then agreed to, and the sitting was suspended.

Folkestone Jubilee Hospital.

On the 19th inst. Sir E. Watkin asked the Secretary of State for War whether, in respect to the Folkestone Jubilee Hospital, he would decide without delay either not to sell the site of the disused battery on the Bayle at Folkestone for any purposes whatever, or to sell it for the purposes of the much-needed hospital at a price to be stated, or to put it up to auction; and whether he was aware that the provision of that jubilee hospital had been delayed for want of a site for a year and a quarter. Sir H. Maxwell, in reply, stated that it had not yet been decided whether the site of the battery on the Bayle should be sold or not, but if it were sold it would be by public auction.

British Medical Practitioners in Switzerland.

In the unavoidable absence of Dr. Farquharson, who had put the question on the paper, Mr. Causton asked the Under-Secretary of State for Foreign Affairs whether he had any further information to give the House as to the result of the negotiations he had been carrying on with the Swiss Government regarding the rights of English doctors to practise in that country.—Sir J. Fergusson replied that he was glad to say that since the hon. member last inquired on this subject it had assumed a more hopeful appearance. There was reason to expect that temporary measures would be adopted by certain cantonal authorities by which British physicians would be enabled to practise, and he hoped that a permanent and reciprocal arrangement might be arrived at.—Mr. Causton asked whether it was probable that the more favourable arrangements would apply to the whole of Switzerland, and not merely the excepted parts.—Sir J. Fergusson said there were considerable difficulties in the way, but no possible effort would be spared to procure such a satisfactory arrangement.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

EDWARDS, J. E., M.R.C.S., L.S.A., has been appointed Medical Officer for Conwil, Carmarthen.

ELLIOT, J., M.R.C.S., L.S.A., has been reappointed Surgeon to the Belvedere Dispensary, Kent.

GREENWAY, A. T., M.D.Ed., M.B., C.M., M.R.C.S., has been reappointed Surgeon to the Belvedere Dispensary, Kent.

JAMES, JAMES R., M.B.Ed., M.R.C.S., has been appointed Medical Officer of Health for Ystradyfodwg.

JONES, H. R., M.A., M.B., B.C.Cantab., B.Sc.Lond., has been appointed Surgeon to the Liverpool Corporation Waterworks, Llanwddyn.

MACNAB, A. J., L.R.C.P.Lond., M.R.C.S., has been appointed Ophthalmic Clinical Assistant to King's College Hospital.

MCNICOLL, R., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health, St. Helen's Borough, Lancashire.

MARTIN, S. H. C., M.D.Lond., M.R.C.P., Pathologist to the City of London Hospital for Diseases of the Chest, Victoria-park, has been appointed Assistant Physician to the Hospital.

MESSUM, G. B. W., L.R.C.P.Lond., M.R.C.S., has been appointed District Surgeon of Pretoria, Transvaal, vice J. E. Dyers, resigned.

NAPPER, A. A., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for the Hambledon Union.

NELHAM, A. E., M.R.C.S., L.S.A., has been appointed Third Honorary Attending Medical Officer of the Pimlico-road Free Dispensary, London, vice Graham resigned.

ROBERTS, H. W., M.R.C.S., L.S.A., has been reappointed Medical Officer for the Deptford District of the Greenwich Union.

ROBSON, R. B., M.B.Dur., M.R.C.S., has been appointed Medical Officer of the Shilbottle District, Alnwick Union.

SPURRELL, F., L.R.C.P.Ed., F.R.C.S.Eng., has been reappointed Surgeon to the Belvedere Dispensary, Kent.

WHITHAM, A., L.R.C.P.Edin., L.R.C.S.Edin., has been reappointed Medical Officer of Health for Adlington, Lancashire.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BOROUGH OF BRADFORD.—Medical Officer of Health. Salary £500 per annum.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, London, S.W.—Resident Medical Officer. Salary £60 per annum, with board and residence.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Assistant Physician; Resident Clinical Assistant; and Pathologist. Salary 100 guineas per annum for the latter appointment.

CITY OF LONDON LUNATIC ASYLUM, Stone, near Dartford, Kent.—Assistant Medical Officer for seven weeks, as Locum Tenens. Terms 2 guineas per week, with board, lodging, and washing.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—House-Surgeon. Salary £100 per annum, with board and residence in the house.

EASTBOURNE UNION.—District Medical Officer. Salary £85 per annum, with the usual extra fees.

EAST SUFFOLK AND IPSWICH HOSPITAL.—House-Surgeon. Salary £80 per annum, with board, lodging, and washing.

GLASGOW HOSPITAL FOR SICK CHILDREN.—Resident House Surgeon. Salary £60, with board and washing.

KENT COUNTY ASYLUM, Barming-heath, Maidstone.—Third Assistant Medical Officer. Salary £120 a year, with furnished apartments, attendance, coal, gas, garden produce, milk, and washing.

PAROCHIAL BOARD OF PENNYGOWN AND TOROSAY.—Medical Officer. Salary £100 a year.

SURREY DISPENSARY, Great Dover-street, S.E.—House-Surgeon, to reside on the premises. Furnished apartments, coal, and gas provided. Salary £120 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant. Board, lodging, and washing provided.

WORCESTER GENERAL INFIRMARY.—House-Surgeon. Salary £100 per annum, with board and residence.

UNIVERSITY COLLEGE, Dundee.—Professor of Anatomy. Salary £350 per annum, with two-thirds of the fees.

Births, Marriages, and Deaths.

BIRTHS.

AVELING.—On the 16th inst., at The Oaklands, Upper Clapton, the wife of Charles T. Aveling, M.D.Lond., of a son.

FRASER.—On the 13th inst., at Western Lodge, Romford, Essex, the wife of James Alexander Fraser, M.R.C.S., L.R.C.P., of a daughter.

FLECK.—On the 13th inst., at Frogmoor Lodge, High Wycombe, the wife of William Fleck, M.D., of a son.

MALPAS.—On the 16th inst., the wife of Dr. Malpas, of Biarritz, France, of a son.

PANTON.—On the 26th ult., at Moss House, Bolton, the wife of J. E. Panton, M.B., M.R.C.S., of a daughter.

REEKS.—On the 8th inst., at The Green, Southwick, Sussex, the wife of John Reeks, M.R.C.S., L.S.A., of a daughter.

SMITH.—On the 18th inst., at Kensington-gardens-square, the wife of E. Stanley Smith, M.R.C.S., L.R.C.P.Ed., of a daughter.

WHITNEY.—On the 14th inst., at Berkeley-terrace, Wimbledon, Louisa Cholerton, the wife of N. S. Whitney, M.B.Lond., F.L.S., of a daughter.

MARRIAGES.

CREAGH—MILLER.—On the 14th inst., at All Saints' Church, Blackheath, Stephen H. Creagh, Army Medical Staff, to Florence Annie, daughter of J. C. Miller, of Blackheath.

HODGSON—GAY-ROBERTS.—On the 13th inst., at Chalgrave, Bedfordshire, J. Willoughby Hedgson, M.D., to Agnes, widow of the late E. C. Gay-Roberts, Esq., of Turlake, Devon, daughter of the late John Gibson, Esq., Delcombe, Dorset.

DEATHS.

BRICKWELL.—On the 17th inst., at Sawbridgeworth, John Brickwell, M.R.C.S., aged 80.

FOTHERGILL.—On the 15th inst., at Bedale, Yorks, Robert Fothergill, M.R.C.S., eighth son of the late Thomas Fothergill of Alskew House, Yorks, aged 74.

PRATT.—On the 8th inst., at the residence of his brother, Newport, Mon., Thomas Octavius Pratt, L.R.C.P.Lond. &c., late of Cardiff, aged 53.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 21st, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
June 15	30·02	W.	53	51	79	58	49	·17	Overcast
,, 16	29·82	N.E.	53	50	105	62	50	·22	Cloudy
,, 17	30·05	N.E.	52	49	69	55	47	...	Overcast
,, 18	30·19	N.E.	51	47	71	57	47	...	Overcast
,, 19	30·20	N.E.	51	48	65	55	47	·04	Overcast
,, 20	30·14	N.E.	52	50	69	56	48	...	Overcast
,, 21	29·98	N.E.	56	55	101	64	50	·10	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

THE PROFESSION IN BRISTOL.

BRISTOL is associated in the medical mind with many names of honour. But there seem to be there a few practitioners who have not been taught the traditions of the profession. A wonderful collection of bills, cards, circulars, advertisements, &c. have been sent us, some said to be displayed in beerhouse windows, and all meant for general circulation. It is to be hoped that a similar collection will be forwarded to the bodies which are responsible for the diplomas and degrees held by these gentlemen; for we regret to see that neither a degree in medicine nor the Fellowship of a College of Surgeons seems to save its possessor from such questionable methods of seeking practice. Our views on the discipline of the profession are stated elsewhere.

Ignoramus.—"Pneumoparesis" is a term proposed by Dr. Richardson to express simple respiratory failure.

X. Y. Z. had better consult her medical attendant.

AN ANTISEPTIC FOR MIDWIVES.

To the Editors of THE LANCET.

SIRS,—Would any of your readers tell me what is the best antiseptic to recommend for the use of dispensary midwives? Besides being efficient, it should be safe and not unpleasant for common use, and inexpensive. Creoline has been suggested. I should be glad to learn from any who have had experience of its use.

I am, Sirs, yours faithfully,

June 15th, 1888. DISPENSARY SURGEON.

*** A teaspoonful of Condy's fluid to a pint of warm water, or a few drops of liq. iodi, in warm water, sufficient to give the colour of light sherry, are useful for vaginal douches in midwifery.—ED. L.

CARPET BEATING IN PARIS.

CARPET beating in the open air has been forbidden by the Conseil de Salubrité of Paris. Carpets must be beaten in closed rooms, and the dust subsequently disinfected.

M. M. has not enclosed his card. We do not reply to anonymous communications.

Mr. A. Bruzelin.—We do not recommend practitioners.

CONSEQUENCES OF SIXPENNY FEES.

THE much-complained-of competition in Belgium is apparently raising a race of "sixpenny doctors" there. A correspondent of the *Scalpel*, writing from Lierre, a town of 18,000 inhabitants near Antwerp, states that some of his *confrères* pay visits amongst persons in comfortable circumstances for fifty or sixty-five centimes, and never charge more than a franc to the wealthy. Attempts have been made in professional circles to fix a franc as the minimum fee for a visit or a consultation; but so much opposition has been raised on the part of some of the medical men practising in the neighbourhood that nothing has come of these proposals. The consequence of this system of extremely low charges is, he continues, that the Lierre practitioners are comparatively little esteemed, and a large number of the inhabitants who would naturally consult them if they had confidence in them prefer to go to Antwerp, a distance of several miles, and cheerfully pay the doctors there from three to five francs for their advice.

Conjoint.—Our correspondent's note has been mislaid. His rival in practice makes a mean use of his degree to disparage other qualifications little inferior, if at all so, to his own. We are not informed how he "tells the public" that our correspondent has not taken proper degrees. But it might not be amiss to send him a lawyer's letter, to remind him that there are legal remedies for such scandal.

B. C. B.—The custom varies in different places. Our correspondent should ascertain the rule of the town in which he is about to reside.

L. O. S.—We know of no effectual remedy for the disfigurement.

METROPITAN RAILWAY ACCIDENTS.

To the Editors of THE LANCET.

SIRS,—Some few months ago I had occasion to visit a patient in the neighbourhood of Baker-street. On getting out of a first-class carriage of the Metropolitan Railway at Baker-street station about 9 P.M. the carriage door was forcibly thrust back on the thumb of my right hand, severing the nail at the root and fearfully crushing it. I was obliged to remove the nail the next day. On receiving the injury I immediately kicked open the door, but could see no one near it or on the platform. I remained standing by the carriage door for someone to come. No one came to shut the door, and the train entered the tunnel with the door unfastened. The next day I went to the Company's office to see Mr. Bell, the general manager. I could not see him, so I made a statement, which was taken down in writing for inquiries to be made. In that statement, which I signed, I said I could not see who shut the door. That statement was fatal to me. The only answer I could get from the general manager was an invitation to issue a writ. I then wrote to Sir Edward Watkin and the Board of Directors, stating all the facts with regard to the injury, and that Mr. Barnard Holt had said it would be probably three months before I could follow my profession; that I had been twenty-four years in practice, and largely in midwifery; that I had a large family, and that I would have to pay a qualified substitute for three months. The answer I received from Sir Edward Watkin was: "The directors consider that the case is not one in which they would be justified in making a compensation payment out of the funds of the Company." If I had gone directly to my solicitor, I would have received different treatment. I hope my case will act as a warning to others. I have had to pay a substitute for over three months, and will never have a proper nail on the thumb of my right hand.

I am, Sirs, yours faithfully,

WM. WIGMORE, M.R.C.S., L.K.Q.C.P.I.

Inverness-terrace, W., June 16th, 1888.

A CASE OF INTERMEDIATE CONCEPTION.

To the Editors of THE LANCET.

SIRS,—The rarity of intermediate conception makes the following case, I think, worthy of being placed on record.

On May 23rd I was called to Mrs. D——, aged twenty-six, in her fourth confinement. The vagina was occupied by a large bag of membranes, which I immediately ruptured, and found two feet presenting. While preparing to grasp them, my attention was drawn to a small body between the two feet, and about the size of one of them. It seemed to loosen its attachment, and came away without any force. Thinking it might be a polypus, I laid it aside and proceeded with the labour, which was easy—a seven months' child, and nothing unusual about it. On getting a light (it was then late, and delivery had been performed almost in the dark), I found the small body to consist of a perfect fœtus of not more than eight weeks, with two inches of umbilical cord attached. It was much flattened transversely, judging from its position, owing to pressure between the other child and the promontory of the sacrum. Unfortunately, the placenta was removed before I had time to examine it and ascertain if there were two. The mother had no sanguineous discharge whatever during the period of gestation. A friend to whom I showed the specimen suggested blighted conception of one twin, but this is negatived by its fresh and perfectly normal appearance. I have no literature on the subject, and, being in the country, have no opportunity of consulting any.

I am, Sirs, yours faithfully,

JAMES ARTHUR, L.R.C.P. & S.ED.

Wingate, co. Durham, June 18th, 1888.

CURIOUS CAUSE OF ACTION AGAINST A MEDICAL MAN.

AN old Breton peasant having met with a slight accident, sent for his doctor, who assured him that there was no serious injury, and prescribed a draught, ordering at the same time some leeches to be applied. As leeches were not easily procurable, the patient asked the doctor to get them for him. This he promised to do, and the next morning there arrived a bottle containing half-a-dozen fine leeches. The farmer's wife, being in doubt herself, applied to a neighbour for advice how to cook them. The result was that they were fried. The patient disliked the bitter taste of the first one so much, that he declined eating any more. However, his wife insisted that as they had to pay for the "medicine" it ought to be taken, and so the poor man actually ate the whole of the fried leeches. He was afterwards seized with a severe and fatal illness, which was attributed to poisoning by the leeches. The widow brought an action against the doctor, who, however, was exonerated from all blame by the court.

Worried is quite able and entitled to say that his qualification is as good as that of many who call themselves physicians, and is recognised as such by the Medical Council. He should make a point of explaining this to the authorities. He will do well to complete his qualification, if in no other way, by submitting to the surgical part of the examination of the Apothecaries' Society. Do not let our correspondent "worry" himself, but do his duty, and all will come right.

Mr. Edward Bellis.—Our correspondent's name is probably on the jury list, and, if so, he is bound to serve (though most likely he would on application be excused). Our correspondent should see that his name is removed from the list, or he will be liable to serve. He is clearly entitled to exemption.

F. R. W.—Such details depend on the circumstances of each case, and should be clearly defined beforehand by contract.

SEVERE DIARRHŒA CONTROLLED BY RESORCIN.

To the Editors of THE LANCET.

SIRS,—F.W——, aged seven years, had been suffering for three days from severe diarrhœa. On the second day of the attack his mother gave him a dose of castor oil, followed by boiled milk and grated ginger after every motion, but without effect. On the morning of the third day small doses of brandy and laudanum were tried; but as he was getting no better, I was summoned to see him on the evening of the same day. When I arrived I found him very weak, and having an alvine evacuation about every thirty minutes. There was a history of gastric trouble and tormina on the first and second days, but not afterwards. I ordered suitable diet and a mixture containing tincture of catechu, tincture of opium, tincture of compound chloroform and chalk, to be taken after every motion. I called again next day, but found no improvement. I prescribed a pill of lead and opium (B.P.), to be taken every third hour. On the following day the stools were not so frequent, but were very offensive. Thinking the antiseptic action of resorcin would probably neutralise the poison of the microbe which was possibly the cause of the persistent intestinal disturbance, I determined to give it a trial. I accordingly prescribed ten grains of resorcin dissolved in half an ounce of distilled water, to be taken every hour, which speedily reduced (after the fifth dose) the motions to five in the twenty-four hours, and rendered them odourless. I subsequently increased the dose to fifteen grains, to be taken every third hour, and afterwards every fourth hour. In three days the treatment was discontinued, the alvine action having been completely controlled. Observations:—1. No disagreeable after-effects were noticeable. 2. Having a sweet flavour, resorcin is easily taken. 3 It succeeded where purely astringent and non-germicide remedies had failed.

I am, Sirs, yours faithfully,

G. E. J. GREENE,

Ballycarney, June 9th, 1888. Medical Officer, Ferns District.

INCOME TAX.

To the Editors of THE LANCET.

SIRS,—In consequence of the numerous questions which have been asked us directly and indirectly, Mr. Chapman has, in the fifth edition of "Income Tax, and How to get it Refunded," added (p. 29) a special section for the use of doctors, telling them what deductions they should make from their gross income. This is a most important addition; for our experience has amply shown us that there is scarcely a medical man who is not greatly over-assessed, and does not pay much more than he would otherwise do if he knew how to make his returns. We can boast that scarcely one of our numerous clients in the profession has not obtained either a refund of tax or a reduction in assessment, often they have got both. We know as a fact that in the month of May alone the Inland Revenue issued upwards of 20,000 post-office orders for refunds, and we take credit to ourselves for a goodly number of these. Another book we have much pleasure in recommending is Lawrie's "How to Appeal against your Rates." Armed with these two little handbooks no person should be overtaxed or over-rated.

We are, Sirs, your obedient servants,

THE INCOME TAX REPAYMENT AGENCY.

Colville-terrace, W., June, 1888.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Warren Bey, Paris; Dr. Hardwicke, Sheffield; Mr. Rendle, London; Rev. W. Rogers, London; Dr. Mattison, Brooklyn, N.Y.; Mr. Dunstan, Truro; Mr. Drew, London; Dr. Allwright, Maidenhead; Mr. Johnston, New York; Mr. White, Leeds; Mr. Warren, Clifton; Mr. W. Lodia, Calle Ancha; Mr. Hopwood, London; Mr. Lockwood, London; Dr. Hale White, London; Surgeon-Major Pilsher, Darjeeling; Mr. Williamson, Liverpool; Mr. Yeates, Peckham; Dr. Cresswell, Louth; Dr. Daly, Hull; Mr. Humphreys, London; Mr. Green, Bow; Mr. Hardwicke, Dovercourt; Mr. Walker, Alicedale; Dr. Capon, London; Dr. Bond, Gloucester; Mr. Wright, Manchester; Dr. Gramshaw, Stillington; Dr. Thursfield, Leamington; Mr. Foulerton, Chatham; Mr. Neve, Kashmir; Dr. Hamilton, Liverpool; Mr. Smith, London; Dr. Steele, Manchester; Mr. Snell, Sheffield; Mr. Squire, London; Mr. Jeffery, Eastbourne; Mr. Stallard, Worcester; Mr. Jones, Bristol; Dr. Hime, Bradford; Mr. Clark, Doncaster; Mr. Maxwell, Richmond; Mr. Boyce, Shrewsbury; Mr. Wigmore, London; Mr. Mayhew; Mr. Woodcock, Bradford; Dr. Johnson, Bayswater; Mr. Lumsden, Gateshead; Mr. Rawlings, London; Mr. Pilkington, Reading; Mr. Hambleton, London; Mr. Robinson, London; Mr. Humphreys, Darlington; Enquirer; Justitia; X. Y. Z.; A. C. B., London; Nerve; Dispensary Surgeon; Stafford Infirmary.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Smith, Sheffield; Mr. Graham, Wigan; Mr. Bunting, Notts; Messrs. W. and H. Smith, Eversham; Dr. Wetherall, Northallerton; Mr. Fleck, High Wycombe; Mr. Challinor, Askam-in-Furness; Messrs. Willats and Charlton, London; Mr. Thwaite, Bristol; Mr. Lee, Leeds; Mr. Van Praagh, London; Miss White, Woking; Dr. Craster; Messrs. Sharp and Co., Glasgow; Miss Guinness, Maidstone; Mr. Laban, West Bromwich; Mr. Moore, Folkestone; Mr. Bryden, York; Mr. Hyde, Northampton; Mr. Hatch, Ireland; Mr. Newsholme; Mr. Schofield, Wisbeach; Mr. Challand, Matlock; Mr. Marquis, Dundee; Mr. Iles, Taunton; Mr. Townsend, Exeter; Mr. Knott, Ormesby; Mr. Allan, Liverpool; Mr. Wormald, Manchester; Mr. Heywood, Manchester; Mr. Emmison, Lincoln; Mr. Smyth, Drumlohan; Messrs. Carr and Co., Carlisle; Mr. Mason, Hull; Mr. Petherick; Messrs. Porteous and Co., Glasgow; Mr. Phillips, Egham; Mr. Hardman, Southport; Mr. Jones, London; Q., London; J. T. B., London; Z., London; W. T., Devon; Boro' of Sheffield; T. P., Manchester; Hypodermic, London; Marcus, London; 7894, Edinburgh; A. B., Derby; Ajax, Scarboro'; Leicester, London; S. K., Rochdale; E. T., London; Dr., Bristol; Longford, London; Dr., London; M.D., Bath; K. M. E., Cricklewood; Ready, London; Istros, London; Beth, London; X., London; A. P., London; M.D., Bristol; J. P., Stratford; D. M., London; M.B., London; Labor, London; X. A., London; Medicus, Greenwich.

Yorkshire Post, Manchester Guardian, Reading Mercury, Hertfordshire Mercury, Windsor and Eton Express, Herald and Weekly Free Press, Surrey Advertiser, Liverpool Daily Post, Daily News, &c., have been received.

Medical Diary for the ensuing Week.

Monday, June 25.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, June 26.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 3 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. Donald Mac Alister: On Antipyretics. (Croonian Lecture.)

Wednesday, June 27.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-ST.—Operations, 9 A.M.; Saturday, same hour.
COLLEGE OF STATE MEDICINE (Theatre of the Chemical Society, Burlington House).—4 P.M. Sir Robert Rawlinson: The Rise and Progress of Sanitary Engineering within the Present Century.
BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Specimens will be exhibited by Dr. Fancourt Barnes, Dr. Granville Bantock, Mr. Lawson Tait, Dr. Richard Smith, Dr. Mansell-Moullin, and others. Dr. Henry T. Rutherfoord: Case of Uterine Fibroid successfully treated by Electricity.—Dr. C. D. Sherrard: Retroversion of the Gravid Uterus at the Fourth Month. Council, 8 P.M.

Thursday, June 28.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. Donald Mac Alister: On Antipyretics. (Croonian Lecture.)
NEUROLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. W. H. Gaskell: On the Plan of Formation of the Spinal and Cranial Nerves, together with Suggestions on the Origin of the Central Nervous System.—Prof. Schäfer will exhibit Photographs of certain Monkeys' Brains recently shown to the Society.

Friday, June 29.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, June 30.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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